INVESTIGATION OF CORPS OF ENGINEERS CIVIL WORKS PROGRAM

HEARINGS

BEFORE THE

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

EIGHTY-SECOND CONGRESS

FIRST SESSION

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PART 2

PROPOSED TENNESSEE-TOMBIGBEE WATERWAY

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INVESTIGATION OF CORPS OF ENGINEERS CIVIL WORKS PROGRAM[1]

PROPOSED TENNESSEE-TOMBIGBEE WATERWAY

TUESDAY, MAY 22, 1951.

WITNESSES

MAJ. GEN. LEWIS A. PICK, CHIEF OF ENGINEERS
BRIG. GEN. C. H. CHORPENING, ASSISTANT CHIEF OF ENGINEERS FOR CIVIL WORKS
COL. W. E. POTTER, ASSISTANT CHIEF OF ENGINEERS FOR SPECIAL PROJECTS
LT. COL. CRAIG SMYSER, EXECUTIVE OFFICER TO CHIEF OF ENGINEERS
H. R. FAISON, CHIEF, ECONOMICS DIVISION, BOARD OF ENGINEERS FOR RIVERS AND HARBORS
A. L. MALONE, FIELD SERVICE BRANCH, ECONOMICS DIVISION, BOARD OF ENGINEERS FOR RIVERS AND HARBORS
J. W. GROSART, SPECIAL ASSISTANT, ECONOMICS DIVISION, BOARD OF ENGINEERS FOR RIVERS AND HARBORS
E. E. BOTTOMS, CHIEF, REVIEW BRANCH, ECONOMICS DIVISION, BOARD OF ENGINEERS FOR RIVERS AND HARBORS
F. B. SLICHTER, CHIEF, ENGINEERING DIVISION, CIVIL WORKS

Present: John J. Donnelly, Jr., Esq., Counsel, House Appropriation Committee.

Chairman CANNON. Will you read the names of the witnesses, Mr. Chairman? I believe there are several witnesses appearing before us at this time?

Mr. KERR. Maj. Gen. Lewis A. Pick, Chief of Engineers.

Brig. Gen. C. H. Chorpening, Assistant Chief of Engineers.

Col. W. E. Potter, Assistant Chief of Engineers for Special Projects.

Mr. H. R. Faison, Chief, Economics Division, Board of Engineers for Rivers and Harbors.

Mr. A. L. Malone, Field Service Branch, Economics Division, Board of Engineers for Rivers and Harbors.

Mr. J. W. Grosart, special assistant, Economics Division, Board of Engineers for Rivers and Harbors.

Mr. E. E. Bottoms, Chief, Review Branch, Economics Division, Board of Engineers for Rivers and Harbors.

[1] The following phase of these hearings, which deals with the proposed Tennessee-Tombigbee waterway, is being printed as pt. 2. Pt. 1 of these hearings has already been printed and is entitled "The Entire Civil Works Program Under Construction in Fiscal Year 1951, Comprising 182 Projects, Including Report of Committee Counsel."
(Construction funds have not been appropriated for the proposed Tennessee-Tombigbee waterway.)

Will those whose names have been called rise and be sworn, please.

Chairman CANNON. Do you, and each of you, solemnly swear that the testimony which you will give to this committee of Congress will be the truth, the whole truth, and nothing but the truth, so help you God?

(The following witnesses answered, "I do":)

Maj. Gen. Lewis A. Pick, Chief of Engineers.

Brig. Gen. C. H. Chorpening, Assistant Chief of Engineers.

Col. W. E. Potter, Assistant Chief of Engineers for Special Projects.

Mr. H. R. Faison, Chief, Economics Division, Board of Engineers for Rivers and Harbors.

Mr. A. L. Malone, Field Service Branch, Economics Division, Board of Engineers for Rivers and Harbors.

Mr. J. W. Grosart, special assistant, Economics Division, Board of Engineers for Rivers and Harbors.

Mr. E. E. Bottoms, Chief, Review Branch, Economics Division, Board of Engineers for Rivers and Harbors.

DIFFICULTY IN SECURING INFORMATION FROM CORPS OF ENGINEERS

Mr. KERR. General Pick, you are here as the first witness, and we will be delighted to hear from you. You may make any statement that you wish to make before the committee.

Chairman CANNON. I may say, Mr. Chairman, that we have had some difficulty in getting information. We have asked for photostats of certain documents which have not been supplied us. I wonder, General Pick, if it would be possible for you to arrange for the Department to designate some one person to whom we can go to get these documents. As it is, we have to see three, four, or five people. We are sent from one office to another. We start down at Gravelly Point and we go clear to D Street, and we wind up without the documents.

We still do not have some of the documents that we have requested from you; although requested several days ago. I wonder if you could designate at this time someone to whom we could go to clear this matter, and to get the documents which we require.

General PICK. Mr. Chairman, I will be very glad to do that, but I want to go on record now as saying that the information which you have is entirely incorrect. I will be very glad to designate General Chorpening, who is in charge of our civil-works program, as the person to be contacted for information.

The information that you refer to, part of it, is carried in the Chief of Engineers Office and part of it is carried as a normal function in the Board of Engineers for Rivers and Harbors.

There has been no delay in furnishing the executive staff of your committee any information.

Chairman CANNON. The only thing I know, General, is that we have been told that information would be available at a certain time, and when that time came it was not available.

General PICK. I hope you will develop that information to satisfy yourself, whether the information you have is correct.

Chairman CANNON. Then, all the information that our committee has requested has been supplied at this time?

General PICK. My entire office has been put at the disposal of the committee. All of our field offices have been put at the disposal of the committee. Every request the committee has made has been supplied promptly. I have set up office space for them in my office. I have answered every request the committee has made. I would like to have my executive officer, Colonel Smyser, tell you of the requests which I think prompted the question which you have asked.

Chairman CANNON. That would be very well.

Colonel Smyser, have you any statement to make on that?

Mr. DONNELLY. I do not think that he was sworn.

Chairman CANNON. Colonel Smyser, do you solemnly swear that the testimony which you will give to this committee of Congress will be the truth, the whole truth, and nothing but the truth, so help you God?

Colonel SMYSER. I do.

Chairman CANNON. Will you give us the statement to which the General refers?

Colonel SMYSER. I will be happy to.

Chairman CANNON. I may say in advance that I take it for granted that all the requests of the committee to the Department have been complied with with your usual promptness and efficiency. I take it for granted that is true.

General PICK. Exceptional promptness and facility.

Chairman CANNON. Colonel Smyser, will you let us have a statement?

Colonel SMYSER. I can hardly amplify on what General Pick has said except in specific instances.

As you know, last year we gave to the representatives of your committee every facility we had, and I understand they were very, very pleased with the reception they got; at least, I asked them to come in and see me at any time they ran into any difficulty. The only time that they came in to see me was to tell me what a commendable job we had done for them, so I assumed we had pleased you and the other people in the committee.

Now, it seems there has been a little disagreement on the furnishing of photostats. I think that is something that is perhaps personal and unavoidable.

We furnished you, as far as I know, right as of this very minute, every photostat that you have asked for. We delivered the last batch to you, I think, at 12:30 today. Our people gave up their lunch hour in order to do it.

Last night I did receive a request for photostats to be made. Unfortunately, it was the first that I knew about it. You wanted to look over three sets of records. I talked to Colonel Cole and asked that those records be made available as promptly as possible, and I am sure they were.

On checking I find out that at 4:30 yesterday afternoon those records—40 in number, I believe—came over to our office. I personally had not known about it; therefore, I had not told our people to go on into the night to photostat them. This morning they got on them. They worked through their noon hour and you had them at 12:30.

Chairman CANNON. The committee very much appreciates your cooperation, Colonel.

The investigation will be conducted by our counsel, Mr. Donnelly. Will you take charge, Mr. Donnelly?

Mr. DONNELLY. In answer to Colonel Smyser, we arranged yesterday morning at Colonel Smyser's suggestion to contact Colonel Cole. At 11 o'clock yesterday morning Colonel Cole and his assistants knew of the documents we wanted, and we asked that arrangements be made to have them photostated. Colonel Cole said that he had no such authority, but we were told—and our man was there—that his assistant was to call you, Colonel Smyser, and we were to get them yesterday afternoon. We called at 5:15 and asked where they were, and you said that we could have them this morning. We called this morning and you said that we could have them this afternoon. I reminded you that the hearing started this afternoon.

There is one document that has been removed from the files—I believe the address is 119 D Street—and all carbons, and has been taken to the Office of the Chief of Engineers. We understand you have photostats—we have been told by yourself—of those documents. There is at least one, and perhaps more, missing. I will identify the one for you. It is a memorandum in February of 1945 from possibly Mr. Faison to Mr. Bottoms, who at that time was in Mobile, and had to do with the field study being made by your engineer, civil engineer, Mr. Schulte. We would like to have that document, General Pick.

General PICK. Was that among the photostats that we gave you last week?

Mr. DONNELLY. It was supposed to have been, but it was not.

General PICK. Perhaps those records were still in my office. I do not know whether they had been returned to the Board for Rivers and Harbors or not. They belong in the file of the Board for Rivers and Harbors, but that batch of stuff that you got had been photostated, and copies sent up here.

Mr. DONNELLY. That is correct.

General PICK. And I remember reading that memorandum myself from Mr. Faison to Mr. Bottoms.

Mr. DONNELLY. There were two, sir, and I am speaking of the one that originally was in the files of the Board but was among the documents removed from that file and taken to your office.

General PICK. It was taken over there to my office for photostating.

Mr. DONNELLY. No, sir.

In advance of the time our man went there last week these documents had been removed from the file, and all carbons, and taken to your office. We have a record of the documents from the investigation of last year.

General PICK. Mr. Chairman, the report which we prepared over there in answer to the committee's report, was prepared in my office. It became necessary for us to have considerable amounts of this information in my office, and it is possible that this memorandum that he is talking about may have been in my office. I do not know. I have tried my very best to furnish the committee with every document and all the help that it was possible to give them. I shall continue to do that, sir.

Chairman CANNON. The committee very much appreciates that, General Pick, and we very much appreciate your cooperation in coming here today and providing us with the information that has been requested. As you understand, this is one of the routine investigations by the Committee on Appropriations. We are investigating practically every department and every activity, and this is one department being investigated. We will ask Mr. Donnelly to conduct the inquiry.

Mr. DONNELLY. May I proceed?

Chairman CANNON. Mr. Donnelly.

INTRODUCTORY STATEMENT BY COUNSEL

Mr. DONNELLY. At the outset, gentlemen, I would like to read an introductory statement with respect to the proposed Tennessee-Tombigbee. I reduced it to writing so the background will be stated with such accuracy as is desired. Each member of the committee has a copy of this reference. It is entitled "Introduction." [Reading:]

The proposed Tombigbee waterway was surveyed in 1875, 1913, 1923, and 1932. None of the reports resulting from these surveys was favorable. The project was resurveyed in 1935 and a recommendation made for further surveying (reference: H. Doc. 486, 79th Cong., 2d sess.).

In 1939 the Chief of Engineers, then Maj. Gen. J. L. Schley, submitted a report to Congress, printed as House Document No. 289, Seventy-sixth Congress, first session. General Schley did not affirmatively recommend the project, but instead said:

> I have no doubt that benefits of value to national defense, from enhancement of land values, and from increased use of recreational areas will be produced. Furthermore, provision of a direct water route to the Gulf of Mexico from the Tennessee Valley may hasten the development in that valley resulting from the navigation project and electric-power system now being constructed there by the Federal Government. The large amount of construction involved in this connecting waterway to the Gulf would provide substantial direct employment over a period of 8 years and large orders to cement and steel mills and to the lumber industry. *All these intangible or indirect benefits must be considered in addition to the direct savings in transportation costs in order that this project will show a substantial excess of benefits over costs. They are difficult to evaluate and appear to me to be questions falling within the realm of statesmanship to which the Congress can best assign the proper values.*[1] [Emphasis supplied.]

It was evident to Congress from this report that the project could not be justified by the statutory criterion, a favorable cost-benefit ratio, unless intangible and arbitrary values such as national defense ($600,000), enhancement of local land values ($275,000), and recreation ($100,000), were included in the ratio. In congressional hearings and debates, Senators and Congressmen objected to these intangibles, and they have been dropped in subsequent consideration of the project.

On January 2, 1945, the House Rivers and Harbors Committee by resolution requested the Chief of Engineers to resurvey the project again, and submit a new report. The Chief of Engineers did so, and his report was submitted to Congress and printed as House Document No. 486, Seventy-ninth Congress, second session. This report stated that the ratio of benefits to costs was 1.05 to 1, and recommended construction of the project.

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[1] H. Doc. 289, p. 8, par. 6.

Congress has heretofore given consideration to this project in hearings, as shown by the following table:

CONSIDERATION GIVEN BY CONGRESSIONAL COMMITTEES IN HEARINGS TO PROPOSED TOMBIGBEE-TENNESSEE WATERWAY (1943–51)

1943—House Rivers and Harbors Committee, Seventy-eighth Congress, first session, October 20 and 21, 1943
1946—House Rivers and Harbors Committee, Seventy-ninth Congress, second session, May 1 and 2, 1946
1946—Senate Commerce Committee, Seventy-ninth Congress, second session, June 13 and 14, 1946
1947—Senate Appropriations Committee, Eightieth Congress, first session, July 12 and 14, 1947
1948—House Appropriations Committee, Eightieth Congress, second session, February 2, 1948
1948—Senate Appropriations Committee, Eightieth Congress, second session, March 9 and 12, 1948
1949—Senate Appropriations Committee, Eighty-first Congress, first session, April 15 and 20, 1949

The investigative staff of the House Appropriations Committee investigated this proposed project in 1950. The staff engaged in this study was composed of two engineers, an economist, and an investigator. The staff studied the files of the Corps of Engineers. In addition, members of the staff visited the site of the proposed project and interviewed numerous people in the general area of the project. The staff submitted their report to the committee in January 1951. On April 3, 1951, the Civil Functions Subcommittee furnished a copy of the staff report to the Corps of Engineers. The Corps of Engineers prepared a report answering the staff report, and submitted their report to the committee on April 23, 1951.

General, does that fairly state the background, as you know it?

General PICK. Yes.

Colonel POTTER. What date did you say you furnished a copy?

Mr. DONNELLY. April 3, 1951. Is that correct, Colonel?

Colonel POTTER. Yes.

Mr. KERR. Now, General, do you have a statement to make to us? We will be glad to have your statement. We will try not to interrupt you.

TESTIMONY OF MAJ. GEN. LEWIS A. PICK, CHIEF OF ENGINEERS

General PICK. Mr. Chairman, your investigating committee, the staff committee, has made a study of various projects and features of the civil works program of the Corps of Engineers, and have rendered a report. The report is in general an accountant's report. It deals with the administration of projects; the planning. It touches lightly on construction features, but does not comment on the construction, the quality of the construction, and the soundness of the construction.

It is an academic study of the administrative procedures of the Corps of Engineers in general.

That report was made to the committee and referred to the Chief of Engineers in an informal manner on the 3d of April, and we were asked to have a report prepared on the committee's report at the earliest possible date.

The report was divided into two parts; (1) a general report covering a large number of projects extending over the entire United States; (2) the other report dealt specifically with the Tennessee-Tombigbee waterway.

It was urged upon us we get in our reply within 2 weeks. It was physically impossible to do that. We submitted our reply to the general report on April 16, 1951; and then an additional week was granted to us in order to complete the study on the Tennessee-Tombigbee waterway.

The questions raised in your committee report, the recommendations which are included in the report, were all analyzed and studied, and the Chief of Engineers has rendered a report on both the general report and the Tennessee-Tombigbee waterway.

We have found that the report is in general very much the same kind of report that I had made just a few months after I became Chief of Engineers—a management report.

Mr. DONNELLY. May I ask, General, are you now referring to your own report in answer to the staff report of this committee, or are you referring to the staff report of the committee?

General PICK. I am referring to a management report that was worked up by our management department of the Army.

Mr. DONNELLY. And you said that is similar to some report that we are considering here.

General PICK. Similar to the report rendered by this staff of the committee.

Mr. DONNELLY. Thank you.

Mr. KERR. Off the record.

(Discussion off the record.)

General PICK. The management report which was made in 1949 was a good report. We have profited by it.

There are many features of the present report rendered by the investigating staff of the Committee on Appropriations, and we welcome them. The answer to those questions raised in the committee's report, the investigating committee's report, has been made in either the document of the Corps of Engineers rendered on the 16th of April on the general report of January 23, 1951, of the investigating staff of the Committee on Appropriations of the House of Representatives, or in the April 23 document which includes the comments of the Chief of Engineers on the reports rendered by the staff on the Tennessee-Tombigbee waterway.

TENNESSEE-TOMBIGBEE REPORT

Mr. Chairman, I shall be very glad to answer any questions or clarify any of the statements included in these reports which the Chief of Engineers rendered to the committee.

That is all that I have to say, sir.

Mr. DONNELLY. May I proceed now, Mr. Chairman?

Mr. KERR. Go right ahead.

STATUS OF DEFINITE PROJECT REPORT

Mr. DONNELLY. General Pick, let me invite your attention to the Corps of Engineers' answer to the committee staff report on the Tennessee-Tombigbee waterway. That is the smaller report, and we will not refer to the larger one (dealing with the 182 projects) here today.

At the bottom of the very first page in paragraph 4 we read:

Conclusion No. 2: "Construction should not start on any part of the Tennessee-Tombigbee waterway above Demopolis until the definite project report covering the entire project has been completed, definite plans prepared, and more accurate cost estimates submitted."

Now, the answer of the Corps of Engineers is contained in the next paragraph, paragraph 5, which reads:

It is the adopted policy of the Corps of Engineers to complete definite project studies and accurate cost estimates prior to requesting appropriations for construction.

Is that true in this case of the Tennessee-Tombigbee, sir?

General PICK. That is true in this case. We are not asking for funds for the Tennessee-Tombigbee now, except planning funds. That is correct, is it not?

Colonel POTTER. There are no construction funds in the budget this year requested—there is nothing in the budget except for planning.

General PICK. That is correct.

Mr. DONNELLY. Has the definite project report on the Tennessee-Tombigbee report been completed by the Corps of Engineers?

General PICK. The definite project report on the Tennessee-Tombigbee waterway has been completed for the first project of a series of projects on the Tennessee-Tombigbee waterway.

Mr. DONNELLY. For the Gainesville lock and dam?

General PICK. That is correct.

Mr. DONNELLY. But the definite project report for the entire project, which you estimate will cost $179,000,000, has not been completed.

General PICK. It has not been completed. It is being worked upon.

Mr. DONNELLY. And the earliest completion date now estimated by the corps is November 1951; is that not correct, sir?

General PICK. That is correct.

APPROPRIATION HISTORY OF THE PROJECT

Mr. DONNELLY. Now, I show you the appropriation history of the Tennessee-Tombigbee waterway, and I will give copies to each of the Congressmen so they can follow it.

(This document is as follows:)

Appropriations history of proposed Tombigbee waterway (authorized in River and Harbor Act of July 24, 1946, fiscal year 1947)

[NOTE.—Definite project report (DPR) has not been completed as of May 22, 1951]

Fiscal year	Engineers request to Bureau of the Budget	Bureau of the Budget estimate to Congress	Appropriated	Other congressional action
1947	None	None	None (but $58,000 allocated for planning by the engineers out of a lump sum).	
1948	$850,000 planning	$300,000 planning	$600,000 planning ($520,000 actually used).	July 2, 1947. Rankin amendment to appropriate $3,000,000 to begin construction defeated. Vol. 93, Congressional Record, pt. 6, p. 8137.
1949	$5,735,000 construction and planning.	$1,500,000 construction. $300,000 planning	None do	June 12, 1948. Item of $1,500,000 to begin construction was inserted by Senate but later stricken out. Reference: Vol. 94, Congressional Record, pt. 6, p. 8017.
1950	$200,000 planning	$200,000 planning	$200,000 planning	Aug. 23, 1949. Item of $2,500,000 to begin construction was inserted by Senate but later stricken out. Reference: Vol. 95, Congressional Record, pt. 9, p. 12073.
1951	$500,000 planning $2,500,000 construction.	do None	$120,000 planning None	May 8, 1950. Rankin amendment to appropriate $2,000,000 to begin construction defeated. Vol. 96, Congressional Record, pt. 5, p. 6657.
1952	$180,000 planning	$100,000 planning	Total appropriated: $920,000 (for planning only).	

NOTE.—The Corps of Engineers on Apr. 23, 1951, again increased their estimate of the construction cost of the proposed Tombigbee waterway, this time to $179,264,000. The investigative staff of the House Appropriations Committee in 1950 calculated the construction cost to be the higher figure of $236,371,000.

Mr. DONNELLY. The figures shown in this table were prepared by the House Appropriations Committee. You will note that the definite project report has not been completed as of this date, May 22, 1951.

The commmittee will also note in 1949, contrary to the statement that we are now considering by the Corps of Engineers, the Corps of Engineers requested the Bureau of the Budget for $5,735,000 for construction and planning. The Bureau of the Budget estimate to Congress that year included an item of construction, $1,500,000.

You will also note in the fiscal year 1951, the engineers again, without a definite project report, asked the Bureau of the Budget for $2,500,000 for construction. No money was recommended by the Bureau of the Budget, and Congress appropriated none.

The planning money so far appropriated by the Congress totals $920,000.

How much of that money to date has been expended for planning, General Pick?

General PICK. I cannot answer that figure offhand, because I do not have it here.

Mr. Slichter, could you give any estimate as to how much of the planning money has been expended to date?

Mr. SLICHTER. As of July last year, at the end of the fiscal year, about $500,00 of that was expended.

General PICK. Approximately $500,000 was expended as of when?

Mr. SLICHTER. As of last July. That is in the committee's report itself.

General PICK. Mr. Chairman, the statement Mr. Donnelly has made is correct. It is customary for us to ask for funds when we have a definite project report in the planning and when we can complete that in time to get work started in a fiscal year. That has been customary for many years.

I have been in the Corps of Engineers, and that has been going on all the time.

Now then, no construction work would be started on a project until a definite project report has been completed for that particular feature of the work which is to be gotten under way by the funds requested.

The statement which is included in our comments here, about the request for funds, is in accordance with the policy that has been pursued by the Corps of Engineers for many years—if you do not ask for funds ahead of time, in order to have funds available when your definite project report is complete, then that goes over for another year at least and the project is delayed that much.

Colonel POTTER. Also, that money was for the Gainesville lock and dam, plans and specifications for which were completed.

COMPLETION DATE FOR A PART OF THE DEFINITE PROJECT REPORT

Mr. DONNELLY. When was definite project report completed on the Gainesville lock and dam?

Mr. SLICHTER. Approximately 3 years ago.

Mr. DONNELLY. Will you supply for us, please, a copy of the definite project report for the Gainesville lock and dam?

Mr. SLICHTER. We can supply information covering that, with copies of the plans and specifications.

Mr. DONNELLY. Now the Gainesville lock and dam is only one item covering the proposed Tennessee-Tombigbee waterway, is it not?

Mr. SLICHTER. That is correct.

General PICK. That is correct.

CONSTRUCTION FUNDS REQUESTED

Mr. DONNELLY. Congress has the function to perform of deciding whether or not, prior to appropriating initial construction funds for projects, Congress wants to spend hundreds of millions of dollars that are involved in these projects.

When the Corps of Engineers, in 1949, requested the construction money, construction and planning, $5,735,000, the only figure by way of estimated total project cost given to the Congress by the engineers is contained in 1945 House Document No. 486; the amount shown there being $136,000,000; is that correct, General Pick?

General PICK. No. We never asked Congress for funds without telling the Congress what the project is estimated to cost when we ask for the funds.

Mr. DONNELLY. Will you supply to the committee from figures in the fiscal year 1949 justification, the estimated total cost of the project, for which you were asking construction money?

General PICK. Mr. Donnelly, I think I have that right here.

Mr. FORD. Mr. Reporter, will you read the question.

(The question was read as requested.)

Mr. FORD. I do not quite understand the question.

Mr. DONNELLY. I should clarify it for the Congressman, if I may.

In 1945, the Corps of Engineers told the Congress this project was going to cost that sum, $136,000,000. In 1939 they told Congress $66,000,000; today as we said, it is going to cost $179,000,000, so it continues to go up. Now, they are not supposed, according to the general's testimony here, to ask for construction money until Congress has been given the facts with respect to the estimated total cost of the project.

You can see here the Gainesville lock and dam on this new part of it [indicating]. Here is the divide cut, which would be 170 feet high, and would involve a hundred million cubic yards of excavation up here [indicating]. The engineers have started down here [indicating].

Mr. FORD. I think I understand that point, but I did not understand what you want to bring out in the question.

Mr. DONNELLY. In 1949 they asked for construction money of $5,000,000 and we want to know——

General PICK. Mr. Donnelly, I do not have that figure here. We can supply you with that figure.

Mr. FORD. I did not get the finish of your statement, when you were interrupted with the general's statement, for the explanation of your question.

Mr. DONNELLY. In 1945 the Corps of Engineers told Congress the project would cost $136,000,000; and now in 1949 fiscal year they were asking for construction money, and the question is, Did Congress in 1949 know what the increased cost, total cost would be?

General PICK. We can give that estimate but I do not have it here.

BASIS FOR ESTIMATED COST OF PROJECT

Mr. DONNELLY. General is the statement in your answer to the staff report in paragraph 6 up to date, that is, that the cost presently, the 1950 estimated cost of the project, is $179,264,000?

General PICK. That is correct.

Mr. DONNELLY. Do you have further figures you want to bring to the committee now?

General PICK. No; no other figures.

Colonel POTTER. They are figured on the 1950 base of price levels.

General PICK. They are based on 1950 prices. I might add at this point here that the investigation committee estimated the cost at $205,540,000. I would like to call on Mr. Slichter to explain that.

Mr. SLICHTER. The figures furnished the investigative staff were those contained in the 1945 report and they are the figures which have been used since the authorization of the project as the basis for bringing the cost estimate up to date as costs increased. Our estimates have been raised, according to Engineering News Record Index.[1] with the qualification and the exception in this case here we are now substituting for 18 structures 10 structures. We have found that our 1945 cost estimate has increased in accordance with normal records of the Engineering News Record Index and would very closely approach the estimate produced by the staff. However, the staff in its

[1] A construction cost index revised and printed monthly in the Engineering News Record, which is a journal of the engineering profession generally. For convenience it is sometimes referred to as the ENR index.

report did point out, and did apparently agree, that there would be some savings due to the fact that we are substituting 10 structures for the 18 contained in the original cost estimate. That is all I have to say there.

General PICK. Therefore the estimate of $179,264,000 is based upon the 10 lock and dam projects rather than the 18, and they estimated the base upon the cost factor in the Engineering News Record Index of 1950. In other words, it is brought up to date.

COST DATA AVAILABLE TO CONGRESS AT TIME OF APPROPRIATIONS

Mr. DONNELLY. General, will you agree with me, that Congress before it exercises its legislative judgment in voting the initial construction money, should at the time they exercise that legislative judgment, have some last-minute estimate of the total construction cost?

General PICK. Mr. Donnelly, that is furnished the Committee on Public Works when the project is authorized, and latest estimates are given to the committee then, and they are based on prices brought up to date, or the committee is told the prices which are used in our estimates.

When we come before the Appropriations Committee, or before, when we make up the budget, when it is submitted to the Bureau of the Budget, we bring the cost estimate up to date on the project which we are asking the funds for. That information is passed on to the Appropriations Committee. That has been the long standing policy, and that is the policy which the committee has demanded and they get every year.

Mr. DONNELLY. Would you also give your total construction cost estimates submitted by the corps to this committee for fiscal year 1951, when the Corps of Engineers requested the Bureau of the Budget for $2,500,000 in construction money? I believe, Mr. Slichter would be able to give that.

General PICK. I think we can give you that.

PROJECT NOT ESSENTIAL TO NATIONAL DEFENSE

Mr. DONNELLY. Let me ask you, General, whether national defense enters into this project in any way or manner?

General PICK. Mr. Chairman, national defense——

Mr. KERR. Let me ask you something off the record.

(Discussion off the record.)

General PICK. Mr. Chairman, the question of whether or not a project comes within the purview of national defense is referred to the Department of Defense or to the Department of the Army and to the Department of Defense, which has the primary interest. The Chief of Engineers is not called upon to determine whether a project is in the interest of national defense, and we never, we never speak for the Department without the definite consent of the Department on any project, as to whether or not it is necessary in the interest of national defense.

Mr. DONNELLY. Let me now read a short letter from W. J. McNeil, Assistant Secretary of Defense, Washington, December 26, 1950, addressed to James J. Maloney, chief, investigative staff, Committee on Appropriations:

DEAR MR. MALONEY: Reference is made to your letter of September 12, 1950, concerning the interest of the Department of Defense in the Tennessee-Tombigbee Canal.

The question has been brought to the attention of all organizational divisions of this Department which might have such an interest and none considers this project as essential to national defense at this time.

Obviously anything which contributes to the improvement of the economic position of the United States has a bearing on national defense, but in this regard the project is not considered to have sufficient high priority as to the military support at present.

Now, General Pick——

Mr. KERR. Who is W. J. McNeil?

Mr. DONNELLY. Assistant Secretary of Defense.

ATOMIC ENERGY COMMISSION HAS LITTLE INTEREST IN PROJECT

General, the next question I would like to ask you, I ask for this reason so that everyone will know.

Over the years much has been said in both Houses of the Congress whether the Atomic Energy Commission at Oak Ridge, Tenn., has a vital interest in this proposed Tombigbee waterway. The staff of this committee has contacted the Atomic Energy Commission and I have their reply here, which I have reduced to summary, so that each of you may see what the Atomic Energy Commission said on this project, and I would like to read it and ask you, General, or your assistants this question: "On October 27, 1950, Mr. J. R. Kelehan——"

Mr. KERR (interposing). That does not constitute evidence before this committee.

Mr. DONNELLY. If we need to get the letter from the Atomic Energy Commission we can.

Mr. KERR. You do not have a document; this is just a statement that has been made by someone.

Mr. FORD. I think that we should not paraphrase a statement; if it is important to include this, we should have the basic evidence, or it should be excluded. If the Atomic Energy Commission is willing to go on record the entire statement ought to go in the record, and not some paraphrased statement that someone might have made.

Mr. DONNELLY. I am perfectly willing to do that. My thought was that we can save a great deal of time by giving the substance of what the Atomic Energy Commission said. The letter from the Atomic Energy Commission can be obtained and inserted at this point in the record. (The letter was received by the committee the following day and is here printed.)

UNITED STATES ATOMIC ENERGY COMMISSION,
Washington D. C., May 23, 1951.

HON CLARENCE CANNON,
Chairman, House Appropriations Committee.

DEAR MR. CANNON: Mr. Vechery, chief of the investigating staff, House Appropr'ations Committee, called our Mr. Kelehan last night and requested that we advise you as to any interest of the Atomic Energy Commission in a project proposed by the Corps of Engineers for the construction of the Tombigbee-Tennessee waterway.

We had occasion to ascertain our interest in this project in October 1950 at the request of Mr. James J. Maloney of the investigating staff of the House Appropriations Committee. We discussed the project at that time with our Oak Ridge operations office, and it did not appear that the Commission would have any particular interest in the construction of the proposed canal as we anticipated obtaining little material over the proposed route. As you no doubt know, the use of natural gas at Oak Ridge has very substantially reduced the required coal shipments to Oak Ridge. There have been no developments since last fall which would warrant any change in our previous conclusions.

If there is any additional information which we can supply, we will be pleased to do so.

Very truly yours,

M. W. BOYER,
General Manager.

Colonel POTTER. May I ask you a question?

Mr. DONNELLY. Yes.

Colonel POTTER. I do not know that I heard you correctly, but did you say that the Corps of Engineers said that the Atomic Energy Commission had said that?

Mr. DONNELLY. No; I said that in the past, in both Houses of Congress the representation had been made many times over past years, that the Atomic Energy Commission always considered the proposed project as important. I did not say that the engineers said that.

Mr. KERR. Well you understand, this is just a statement made by someone.

Mr. DONNELLY. I agree with you; this is just a summary statement by the investigating staff, but we will insert the entire matter.

Mr. KERR. It is just a question of evidence, and this indicates that someone has made a statement said to have been made by Mr. McNeil.

Mr. MCGRATH. We have the original letter from Mr. McNeil.

Mr. KERR. From Mr. McNeil?

Mr. MCGRATH. Yes; from him.

Mr. RABAUT. That has already been read into the record.

Mr. KERR. Anybody could sign that letter; anybody could sign it and say that Mr. McNeil signed it.

Mr. DONNELLY. Does the committee want me to bring proof of that?

Mr. KERR. Well, you are trying to offer this in evidence and I was just raising the question, bringing out the question of evidence.

Mr. RABAUT. The original letter should be shown the witness and the copy can be placed in the record.

(The letter referred to follows:)

ASSISTANT SECRETARY OF DEFENSE,
Washington, December 26, 1950.

Mr. JAMES J. MALONEY,
Chief, Investigative Staff, Committee on Appropriations,
House of Representatives

DEAR MR. MALONEY: Reference is made to your letter of September 12, 1950, concerning the interest of the Department of Defense in the Tennessee-Tombigbee Canal.

The question has been brought to the attention of all organizational divisions of this Department which might have such an interest and none considers this project as essential to national defense at this time.

Obviously, anything which contributes to the improvement of the economic position of the United States has a bearing on national defense, but in this regard the project is not considered to have sufficiently high priority as to warrant military support at present.

W. J. MCNEIL

Flood Control, Power, and Conservation Not Applicable to the Project

Mr. Donnelly. General, is there any flood control involved in the proposed Tombigbee waterway?

General Pick. Mr. Slichter can answer that.

Mr. Slichter. Not unless it would be incidental to the collection of flash drainage from the canal.

Mr. Donnelly. Now is it not a fact that——

General Pick. Mr. Chairman, may I go off of the record?

(Discussion off the record.)

Mr. Donnelly. May I ask you, General, whether there is any power involved in this project?

General Pick. None.

Mr. Donnelly. And may I ask you whether there is any conservation involved in this project?

General Pick. Only incidental in the conservation of water for navigation.

Mr. Donnelly. The reason I asked those questions General, is because the Corps of Engineers in 1950 published a chart covering this project which appears in Ohio River Basin Report of the President's Water Resources Policy Commission, by the Corps of Engineers, and I find in table No. I–c, 12–12, that flood control, power, conservation and so forth have no applicability to the Tennessee-Tombigbee. Is that correct?

General Pick. That would be correct.

Mr. McGrath. I am sorry I did not hear that.

General Pick. That is correct; it would be a navigation project.

Tombigbee River Not Suitable for Navigation

Mr. Donnelly. May I ask you, General, the average down-stream current of the Mississippi River? To help, I might say that the engineers have constantly estimated it at 2.5 miles an hour.

General Pick. I do not think average means anything in that respect; that would be the low-water-flow average. I do not think that means anything. I do not think that the average flow of the Mississippi River would have anything to do, except that during the low-water season that would be the average low-water flow, the average low velocity.

Mr. Donnelly. General, with respect to the Tombigbee River from its confluence with the Warrior River at Demopolis, in a northerly direction some 180 miles to where the construction of the proposed canal would commence [indicating], do you agree with Colonel Feringa's testimony in the 1946 hearings, that this waterway was completely obsolete?

General Pick. The Tombigbee is obsolete?

Mr. Donnelly. Let me read to you his testimony that from the confluence of the Tombigbee with the Warrior at Demopolis [indicating], in a northerly direction to the canal portion of the proposed project, that the Tombigbee River waterway at this point is obsolete.

Mr. Ford. Mr. Chairman, I think when a witness is asked to agree or to disagree with a statement, that in all fairness to the witness and

to the committee the entire statement should be read rather than a paraphrased statement.

Mr. McGRATH. Not the entire statement, but that portion of it.

Mr. FORD. Correct.

Mr. DONNELLY. Referring you, Congressman, to the bottom of page 1 and top of page 2 of this excerpt from the testimony of the hearings before the Subcommittee of the House Appropriations Committee on Civil Functions, Department of Army appropriation bill for 1949, at the bottom of page 1, is this language:

Colonel FERINGA. As you will see from this map, the Tennessee River flows into the Ohio at Paducah. The project provides for a connection between the existing waterway system from Mobile to Birmingham and the Tennessee River and all points north and east. The work would be done by a combination of dredging and the provision of locks.

The up-to-date cost of the work is $136,244,200. We determined that cost last fall, because we had planning money in the last bill which is now available to us, so those costs are up to date as of last September.

Mr. ENGEL. How many miles is it that you have to do work in making that connection from Birmingham north to the Tennessee?

Colonel FERINGA. From Mobile to Demopolis, a distance of 221 miles, the project is already complete. We will have to do new work from Demopolis to Pickwick Pool on the Tennessee River, which is a distance of 260 miles.

Mr. ENGEL. How much of that would have to be dredged?

Colonel FERINGA. The greater portion would have to be dredged.

Mr. ENGEL. In other words, you would have to dredge a channel, two hundred-and-some-odd miles long?

Colonel FERINGA. Not quite, because we have an existing waterway which is known as the Tombigbee River in this location. [Indicating.] That waterway now is completely obsolete.

Mr. ENGEL. You mean there is no river there now?

Colonel FERINGA. There is a river there now known as the Tombigbee, which would have to be dredged and a wider channel provided and cut-offs provided.

Is he correct, General?

General PICK. I will answer your question: The stream in its native state, Mr. Chairman—I do not know whether you would refer to a stream in its native state as being obsolete or not. I think to say that it has never been improved would be a correct statement.

Mr. KERR. It was obsolete so far as traffic on it by boats is concerned; it is obsolete for boat traffic on it?

General PICK. I do not know that it would be obsolete.

Mr. KERR. For navigation.

Mr. DONNELLY. Then, General, is it not the fact that in the proposed project you will have to dredge some two-hundred-odd miles from this point to this point [indicating on map] before you start the canal?

General PICK. Mr. Chairman, I think the attorney is confused on this waterway, because it is proposed to canalize the river by building locks and dams up there to get the required depth. So that if there is any dredging in that it would be only that in connection with the establishment of locks and dams, and they would be up there, perhaps, in the upper reaches of the pool just before you get to the next dam. I think that is what you are getting at.

Mr. DONNELLY. I understand; and there would be some dredging of the river for the first 180 miles from Demopolis up to the beginning of the canal, would there not?

General PICK. I do not think so.

(NOTE.—See Colonel Feringa's testimony, just quoted, to the effect that the greater portion of the proposed waterway will have to be dredged.)

PROJECT DESCRIPTION

Mr. DONNELLY. What is the proposed depth at this point of the river [indicating]? The proposed project that I have indicated on the map is shown to be 9 feet deep, with a channel 170 feet wide.

General PICK. That is the proposed development when it is completed.

Mr. DONNELLY. That is what you propose on the whole project for the 180 mile river portion, is it not?

General PICK. That is correct.

Mr. DONNELLY. The next stage is the canal, 41 miles long, running from this point up to the divide cut, and the project encompasses cutting a channel 170 feet wide and 12 feet deep throughout the length of that canal?

General PICK. To the cut.

Mr. DONNELLY. The canal, to the cut.

General PICK. That is correct; up to the cut.

Mr. DONNELLY. Now when you get to this point, you have a ridge about 170 feet high to be cut for an additional 39 miles to Yellow Creek, the channel to be 150 feet wide, 12 feet deep?

General PICK. That is correct.

Mr. DONNELLY. Then you will draw your water from Pickwick Pool on the Tennessee River down the river to about here [indicating]?

General PICK. That is correct.

Mr. DONNELLY. And there would be water down through the divide cut, down through the canal into the Tombigbee and then on down to the Warrior, and then on down to Mobile?

General PICK. That is correct.

TOPOGRAPHIC DATA FURNISHED CONGRESS

Mr. DONNELLY. Now let me ask you this question, if I may: You may not know, but I am sure Colonel Potter does: Has the Corps of Engineers ever supplied the Congress with a topographic cross section of the waterway so they can see the magnitude of that waterway operation?

General PICK. Not to my knowledge. The Public Works Committee went into this project very thoroughly when it was authorized, and the amount of excavation that was necessary in this cut I am positive was furnished to the Public Works Committee.

Mr. DONNELLY. Let me invite the attention of the committee to a map the engineers supplied to the Public Works Committee; it does not appear in the document you have before you now.

You will see from this map no topography is shown. This water goes 180 miles to here, and then goes 41 miles in the canal which I have indicated [indicating]. And let me call attention to the committee to the fact that this was prepared by the Corps of Engineers; and I would like to put in the record the topographic map showing exactly what is involved in the way of the cut. This is the divide cut, wherein you have a cut of 39 miles, and you have to cut 170 feet down through that ground, and you have to excavate 100,000,000 cubic yards, and it would take at least, on their own figures, 5 years to cut it down to the point where they can operate.

Mr. KERR. Has any work ever been done on this at all?

General PICK. None, except planning work.

Mr. KERR. Except planning work?

Mr. DONNELLY. I would like to put this in the record since it has never been seen by any committee——

Mr. RABAUT. Very well.

(The map is herewith inserted.)

General PICK. The Public Works Committee has seen it.

Mr. DONNELLY. I do not have any knowledge that they have.

General PICK. The Public Works Committee has been shown this information when the project was being considered for authorization.

Mr. DONNELLY. In checking the 1945 hearings for what the Corps of Engineers gave to the Public Works Committee in 1945, it appears that map is not in this House Document No. 486, which was before the Public Works Committee.

Mr. SLICHTER. I think you will find a list of the exhibits on the last page; I think you will find it listed, under the practice of not publishing all the exhibits.

General PICK. Mr. Chairman, in 1939 when this project came up before the committee at that time it was furnished to the committee and is included in this chart which shows maps of the entire area.

Mr. DONNELLY. We understand that, General, but that is not a a topographical map showing the cut that is involved in this situation here.

General PICK. That is a topographical map, and you are talking about a profile. A profile is not a topographical map.

Colonel POTTER. That drawing you have is a profile.

Mr. SLICHTER. This map shows the contours and also has a cross section on the back showing cut dimensions.

Mr. DONNELLY. It is just a question of terms, perhaps. Now, I will identify this map as what the general states is a profile map. Did the engineers furnish that profile map?

General PICK. In that volume I think you will find it away in the back there.

Colonel POTTER. And in this report handed you, Mr. Donnelly, is a profile.

Mr. DONNELLY. Yes, sir. The colonel is calling my attention to a profile of that project. That is the one I showed you Congressmen. Does that show the 170-foot cut we are talking about?

(This map, contained in H. Doc. No. 486, 79th Cong., 2d sess., is herewith inserted.)

Mr. SLICHTER. It is described in the text.

Mr. DONNELLY. I understand it is, but I am speaking of a map. Does this profile map show the topography there?

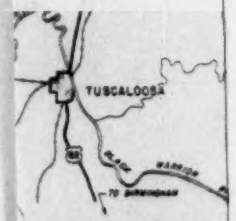
Colonel POTTER. You do not show excavation on topographic maps. There is one way of showing it. You have to show it with a profile.

Mr. DONNELLY. The basic question Colonel Potter sought to answer was, that this profile map was contained in the data given to the Rivers and Harbors Committee in 1945 now contained on the map in the back of House Document No. 486 as showing a profile, and it does not, does it, Colonel?

Colonel POTTER. It shows a profile; yes.

General PICK. You see these steps [indicating] that is a profile.

Mr. DONNELLY. That shows what you want to cut down to, but it does not show what you have to cut through to get down there; does it?



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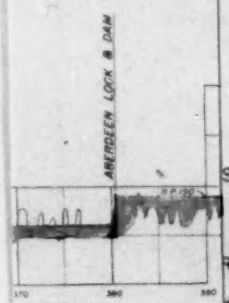


SEE – TOMBIGBEE WATERWAY

PLAN AND PROFILE

ROPOSED SITE REPORT)

0 40 80 120 FEET

OFFICE OF THE DISTRICT ENGINEER

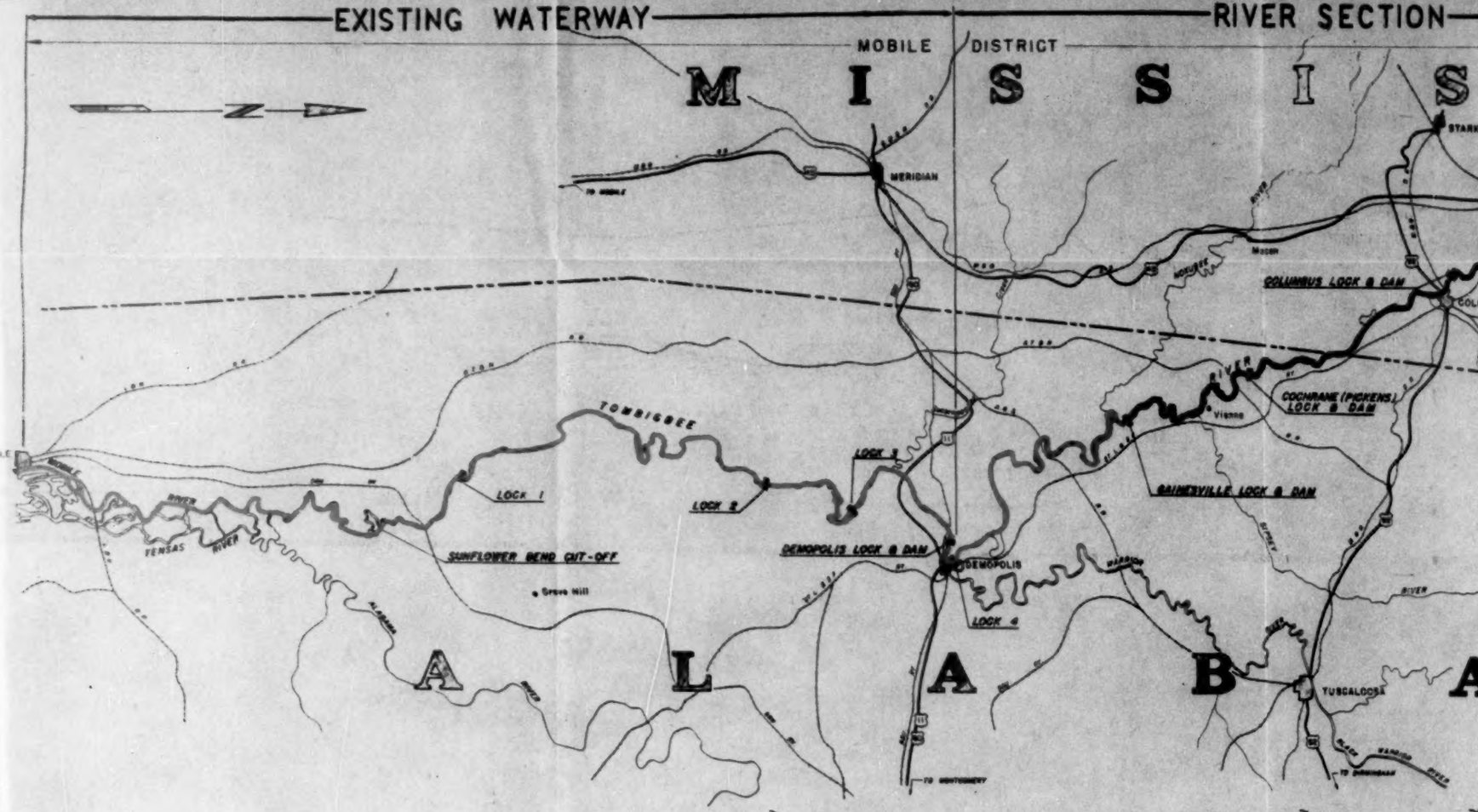
VILLE TENNESSEE DISTRICT JUNE 1947

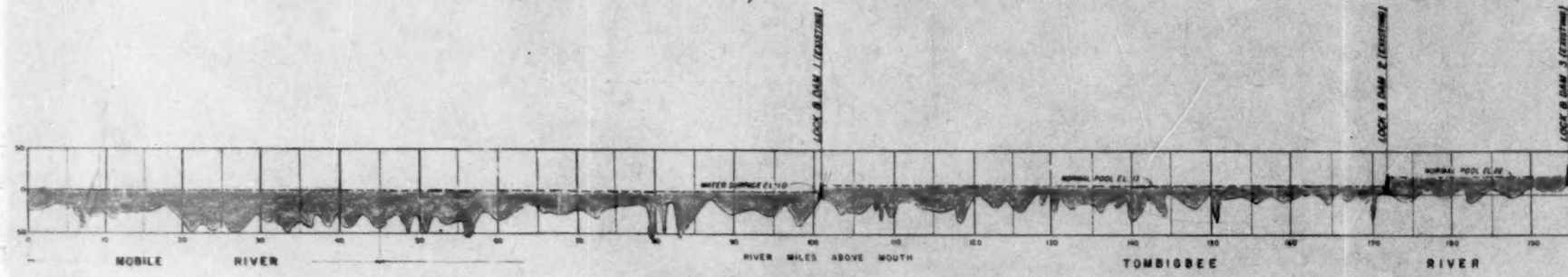
E WATERW

86506 O - 51 (Face p. 18) No. 1

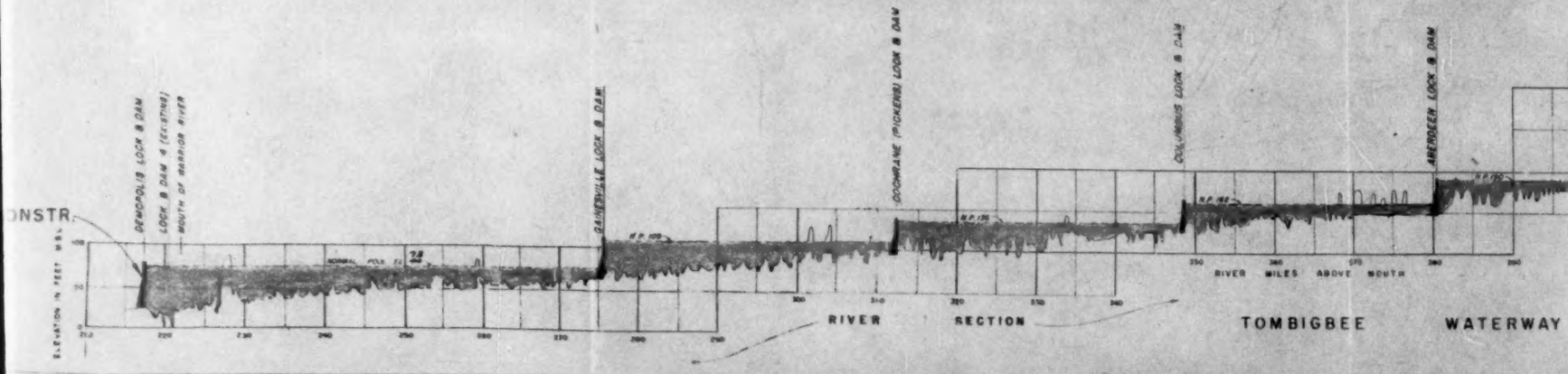
EXISTING WATERWAY — RIVER SECTION

MOBILE DISTRICT





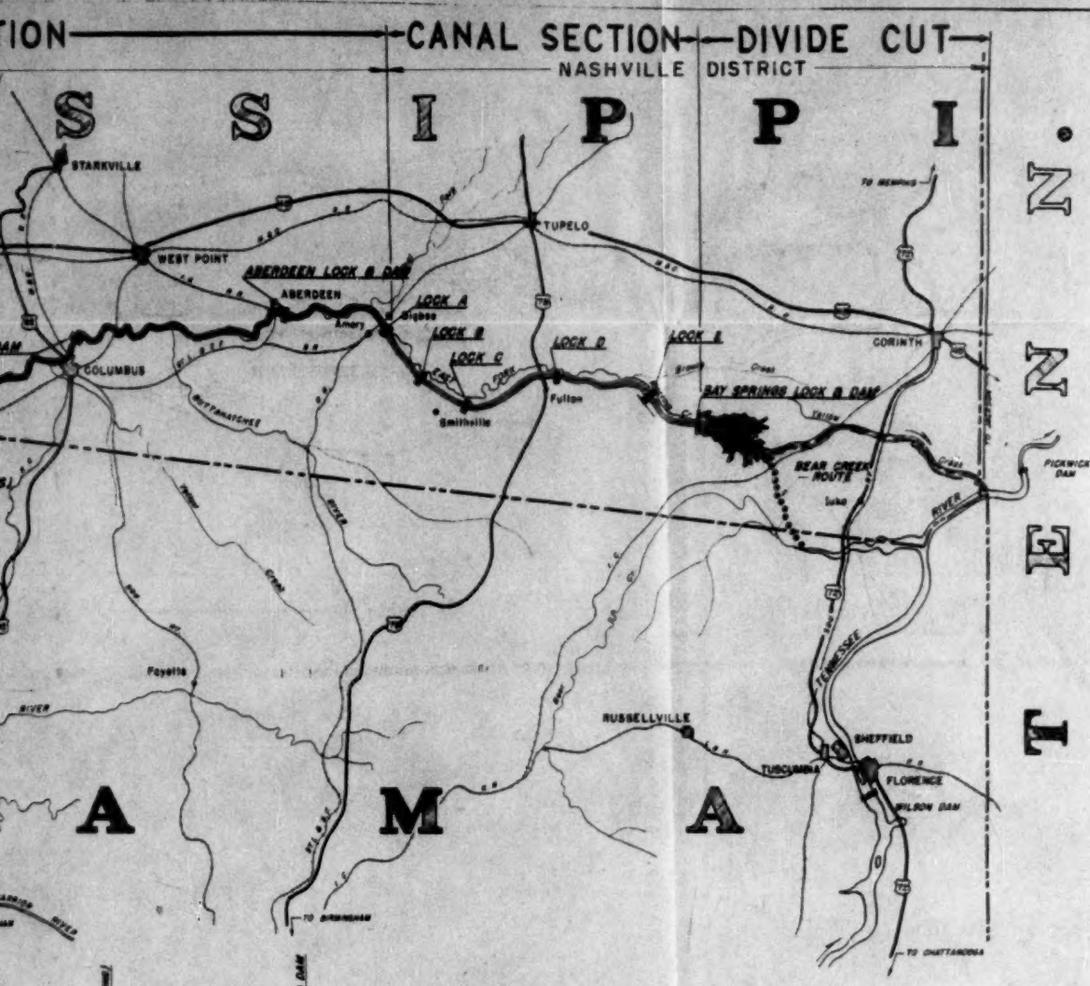
EXISTING WATERWAY — MOBILE TO DEMOPOLIS

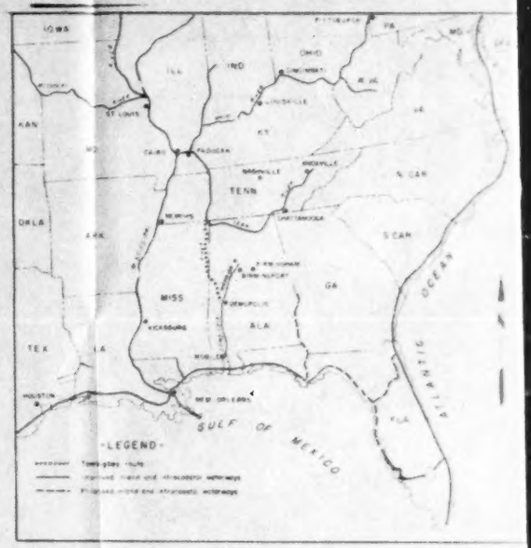

DEMOPOLIS LOCK & DAM
LOCK & DAM 4 (EXISTING)
MOUTH OF WARRIOR RIVER
GAINESVILLE LOCK & DAM
COCHRANE (PICKENS) LOCK & DAM
COLUMBUS LOCK & DAM
ABERDEEN LOCK & DAM
ELEVATION IN FEET MSL
RIVER MILES ABOVE MOUTH

RIVER SECTION TOMBIGBEE WATERWAY

TION—CANAL SECTION—DIVIDE CUT—

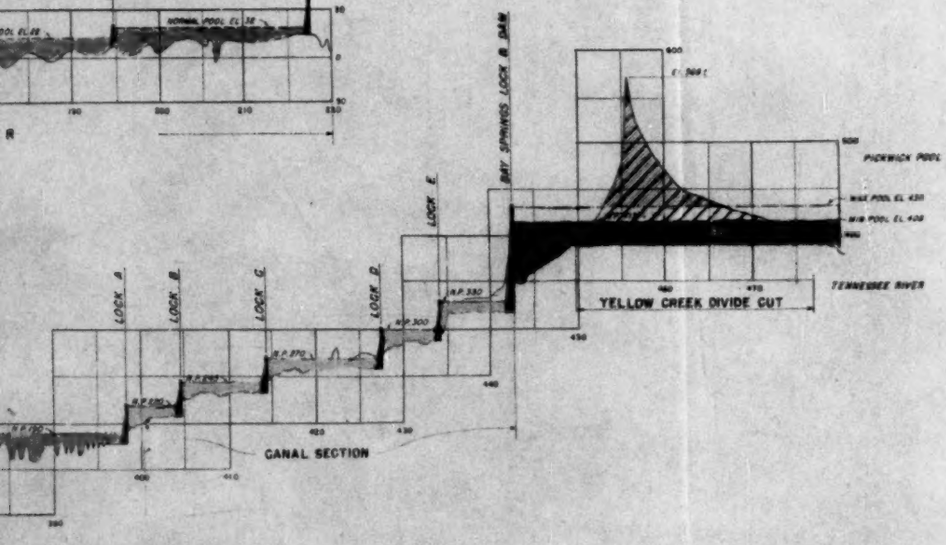
NASHVILLE DISTRICT





VICINITY MAP

SCALE IN MILES



NOTE

Mileages shown on this drawing above Sunflower Grand Cut-off are those given in Rivers and Harbors report of 1946 and are 9.4 miles less than those given in the 1938 report.

TENNESSEE - TOMBIGBEE WATERWAY

GENERAL PLAN AND PROFILE

(PROPOSED SITE REPORT)

SCALE IN MILES

OFFICE OF THE DISTRICT ENGINEER

NASHVILLE TENNESSEE DISTRICT — JUNE 1947

ATERWAY

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Mr. Donnelly. Of cours
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Committee on any project

COST-BENEFI

Mr. Donnelly. Let me a
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Engineers' figures and from
figures are accurate?

(The table is as follows:)

Corps of Engineers:
1945
1947
Investigative staff of House Appropriations
1950

[1] An error in the constituents of this ratio
or understatement of costs would destroy th

General Pick. The first gr
1945 to 1947 benefit-cost ratio
1945 and 1947.

Mr. Donnelly. All right.

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Mr. Donnelly. According

Colonel Potter. No; they

Mr. Donnelly. The staff o

EFFECT OF CONSTRUCT

Now, let me ask you, Gener
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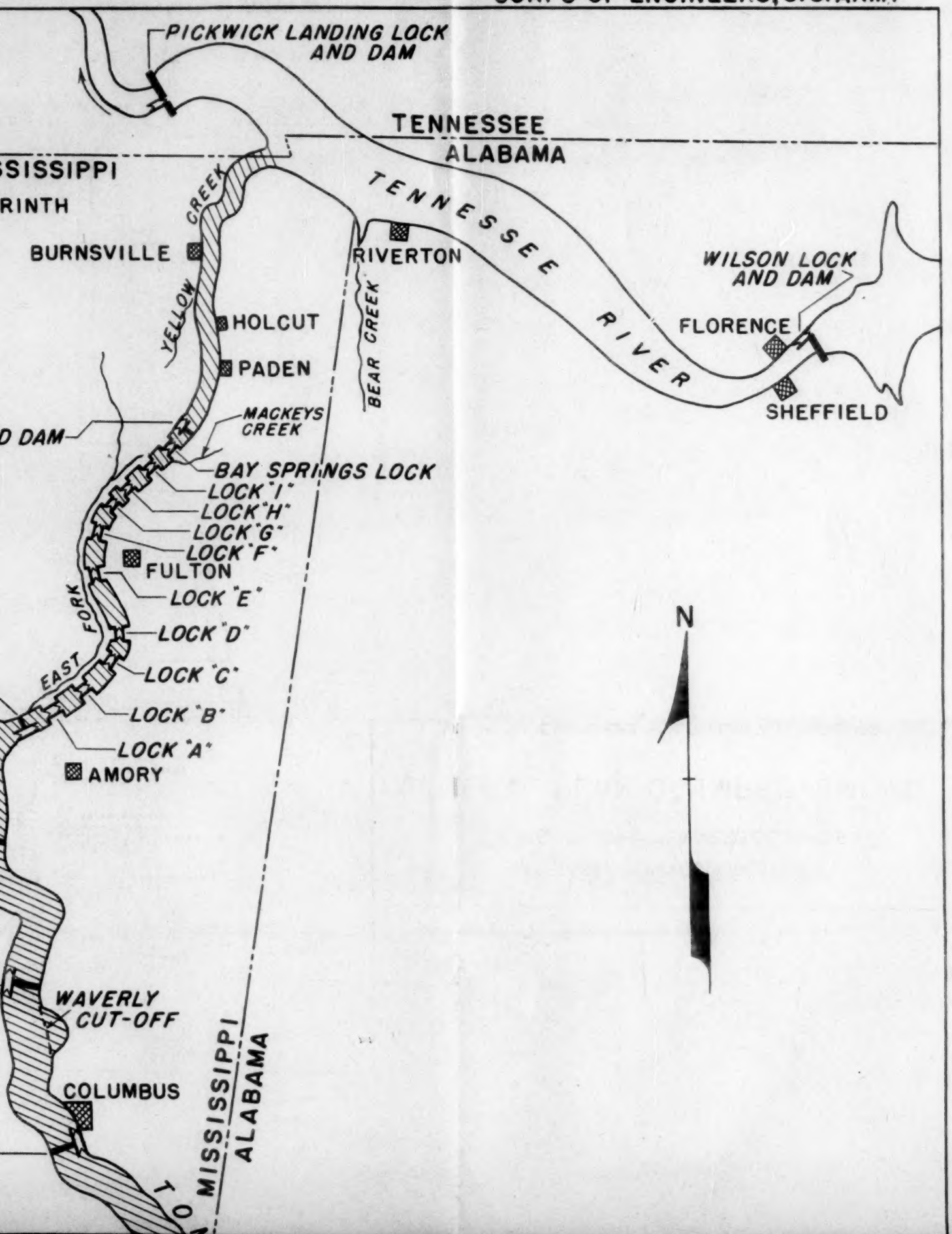
Mr. Slichter. Five years.


PICKWICK LANDING LOCK AND DAM
TENNESSEE
ALABAMA
SSISSIPPI
RINTH
CREEK
BURNSVILLE
TENNESSEE RIVER
RIVERTON
WILSON LOCK AND DAM
FLORENCE
YELLOW
HOLCUT
PADEN
BEAR CREEK
SHEFFIELD
D DAM
MACKEYS CREEK
BAY SPRINGS LOCK
LOCK "I"
LOCK "H"
LOCK "G"
LOCK "F"
FULTON
LOCK "E"
FORK
LOCK "D"
EAST
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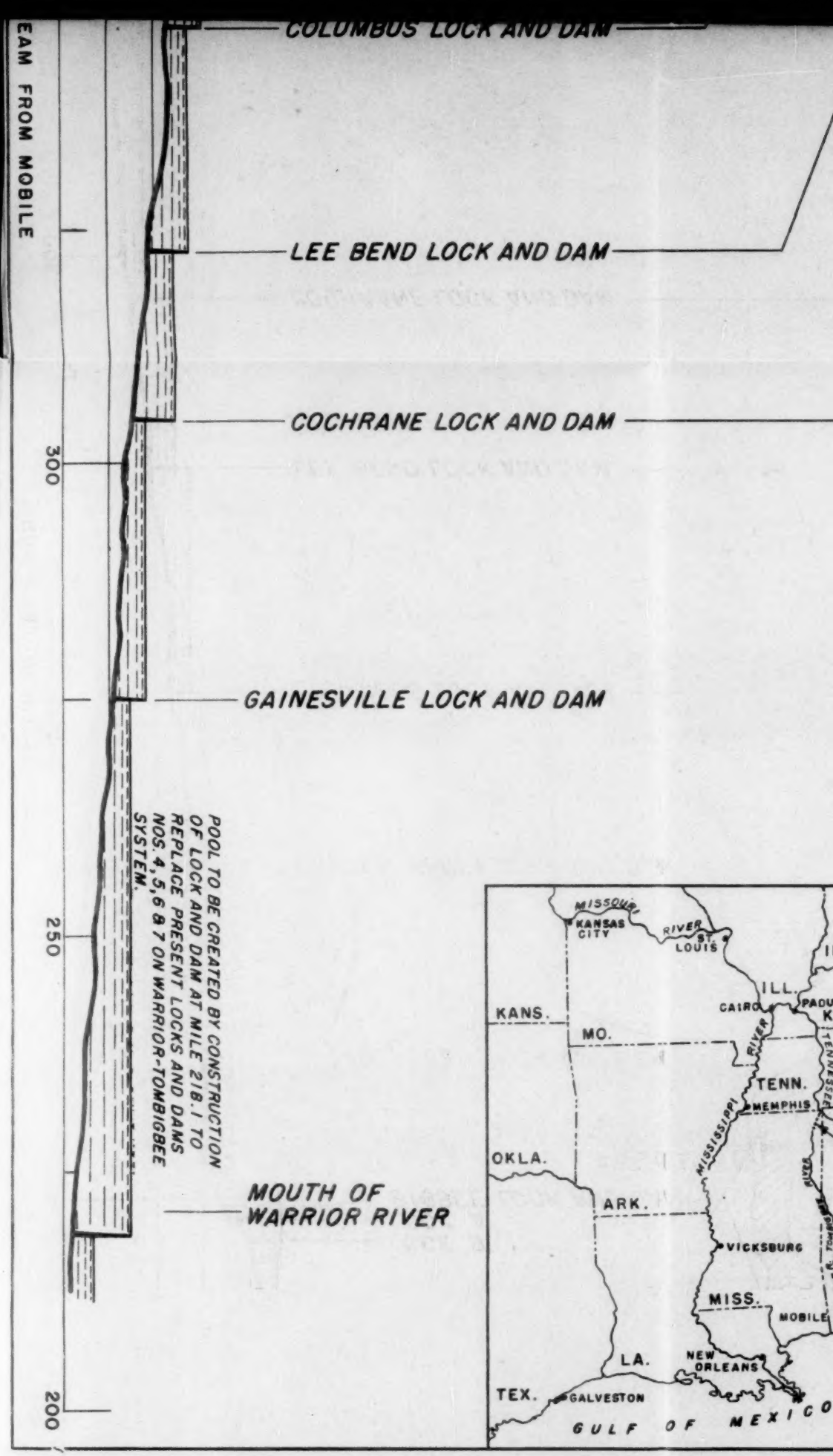
AMORY
N
WAVERLY CUT-OFF
COLUMBUS
MISSISSIPPI
ALABAMA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COLUMBUS LOCK AND DAM
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COCHRANE LOCK AND DAM
GAINESVILLE LOCK AND DAM
MOUTH OF WARRIOR RIVER
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300
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MISSOURI
KANSAS CITY
RIVER
ST. LOUIS
ILL.
CAIRO
KANS.
MO.
TENN.
MEMPHIS
MISSISSIPPI
OKLA.
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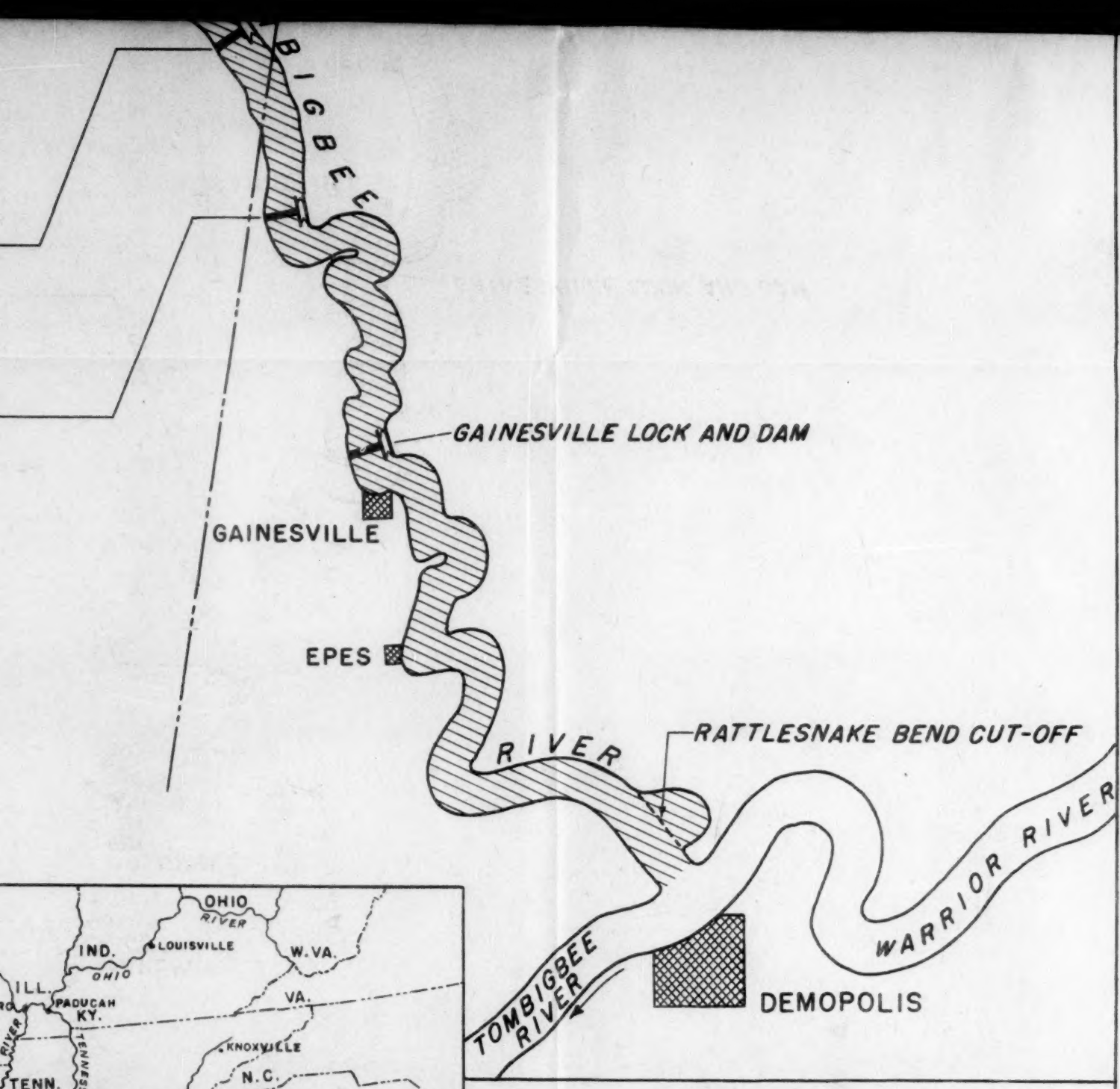
VICKSBURG
MISS.
MOBILE
LA.
NEW ORLEANS
TEX.
GALVESTON
GULF OF MEXICO



WATERWAY CONNECTING THE
TOMBIGBEE AND TENNESSEE RIVERS

GENERAL PLAN OF IMPROVEMENT

BOARD OF ENGINEERS FOR RIVERS AND HARBORS

WASHINGTON, D.C. JUNE 1945

TO ACCOMPANY SURVEY REPORT DATED 10 SEPT. 1945

PLATE III

86506 O - 51 (Face p. 18) No. 2

COCHRANE LOCK AND DAM

GAINESVILLE LOCK AND DAM

MOUTH OF WARRIOR RIVER

300

250

200

MILES UPSTREAM FROM MOBILE

VICINITY MAP

Colonel POTTER. That is in the complete drawings——

General PICK. That is in the complete drawings and in the estimates we prepare when we get figures to estimate costs on.

Colonel POTTER. Mr. Donnelly, the Public Works Committee never feels that with the expenditure of funds required to reproduce those plans for general distribution that the report is worth that expenditure of money. However, they are submitted at the time of the request for an authorization.

General PICK. And the committee's technicians review those carefully, and also the people in the Bureau of the Budget before that report is submitted to Congress go through those plans and specifications and over the quantities involved and check our estimates to see that they are in accordance with the present practices and the present costs prevailing at the time the report is prepared.

Mr. DONNELLY. Of course, this is the kind of information that this committee, the Committee on Appropriations, would like to have at the time that it is called upon to vote initial construction funds.

General PICK. Full information is given to the Appropriations Committee on any project that we present to the committee.

COST-BENEFIT RATIOS OF THE PROJECT

Mr. DONNELLY. Let me ask you, General, if the cost-benefit ratios contained on this table which we have prepared from the Corps of Engineers' figures and from the investigative staff of this committee's figures are accurate?

(The table is as follows:)

Cost-benefit ratios

	Estimated annual savings	Estimated annual cost	Ratio
Corps of Engineers:			
1945	$6,251,000	$5,745,000	1.05 to 1.
1947	7,883,000	6,964,000	1.13 to 1.[1]
Investigative staff of House Appropriations Committee:			
1950	2,843,000	10,597,000	0.27 to 1.

[1] An error in the constituents of this ratio of only 13 percent in the direction of overstatement of benefits or understatement of costs would destroy the economic justification of this project.

General PICK. The first group, which are the Corps of Engineers' 1945 to 1947 benefit-cost ratio figures, are correct as of the dates listed, 1945 and 1947.

Mr. DONNELLY. All right.

General PICK. The benefit-cost ratio which is indicated in the lower tabulation as of 1950, prepared by the investigative staff of the House Appropriations Committee, is incorrect.

Mr. DONNELLY. According to the Corps of Engineers.

Colonel POTTER. No; they are incorrect.

Mr. DONNELLY. The staff of this committee says they are correct.

EFFECT OF CONSTRUCTION TIME ON COST-BENEFIT RATIO

Now, let me ask you, General, with respect to your 1945 ratio, 1.05 to 1, how many years of construction is that predicated upon?

Mr. SLICHTER. Five years.

Mr. DONNELLY. Now, if the project took 8 years, by mathematics, the ratio would go down to 1.02 to 1, and if the project were to take 10 years, as estimated by the investigative staff of this committee, and who have had their own engineers go out and survey it, who estimate the project will take 10 years, if the project were to take 10 years what happens? The ratio would be destroyed, and it would go down to unity 1 to 1?

General PICK. Mr. Donnelly, that line of reasoning would also be true if you were to extend the work over a period of 20 years. The Corps of Engineers make estimates based on the economical program of construction, and as long as you stay within that the cost-benefit ratios will remain fixed.

Mr. DONNELLY. General, let me invite your attention to the comment of the Corps of Engineers on page 2, paragraph 9, of this document which reads as follows:

> There is agreement with the statement on page 10 of the staff's report that: "The excavation of approximately 100,000,000 cubic yards of material in the divide with a maximum cut of approximately 175 feet is a major project * * *"

Now, this is your answer:

> However, the accomplishment of this work in 5 years with an average earth movement of 20,000,000 cubic yards per year is not believed to be a difficult task considering the modern earth-moving equipment that is now a standard item of plant for all earth-moving contractors.

Do we understand from the language I have just read from your report that you understand the construction period as of now to be 5 years?

General PICK. The job can be done without difficulty in 5 years, Mr. Donnelly. We are moving earth in projects now at a much faster rate than would be required to carry on that excavation there in 5 years.

(NOTE.—The Corps of Engineers in the document dated July 19, 1950, and quoted below at p. 23, estimated a "probable 6 years" to complete work on the divide cut.)

Mr. DONNELLY. Now, General, the movement of 100,000,000 cubic yards of earth in 5 years is quite an operation, but can the 10 locks and dams from Demopolis on up here, on up through the canal, totaling 221 miles, can all of that part of the project be completed at the same time you are excavating this 100,000,000 cubic yards of earth?

General PICK. That is correct. They are individual projects. If you had the funds you could work on every one of them at one time.

STATUS OF PLANNING

Mr. DONNELLY. Now General, the engineers of the committees' staff, through the cooperation of your corps have had the opportunity to examine the files of your corps in the various district offices. Now, part of this project would be under your Nashville district office; would it not, sir?

General PICK. Part of it is being studied in the Nashville district now.

Mr. DONNELLY. What other districts would be involved, General?

General PICK. The Mobile district which is in the other watershed opposite, on the Tombigbee River watershed.

Mr. DONNELLY. Let me invite your attention to a document on the letterhead of the Corps of Engineers, United States Army, Office

of the District Engineer, Nashville District: "Refer to File No. —. Minutes of meeting of site board Tennessee-Tombigbee waterway. Date: July 19, 1950.

"Place: Nashville, Tenn."

I would like to insert excerpts from this document in the record. (These excerpts are as follows:)

CORPS OF ENGINEERS, UNITED STATES ARMY

OFFICE OF THE DISTRICT ENGINEER, NASHVILLE DISTRICT

303 United States Courthouse, Nashville, Tenn.

MINUTES OF MEETING OF SITE BOARD TENNESSEE-TOMBIGBEE WATERWAY

Date: July 19, 1950
Place: Nashville, Tenn.

Present:

Office of the Chief of Engineers:
Mr. F. B. Slichter [1]
Mr. Ralph L. Bloor
Mr. A. L. Cochran
Mr. K. L. Coltrin

South Atlantic Division:
Mr. C. P. Lindner [1]

Mobile district:
Col. W. K. Wilson, Jr.
Mr. G. B. Weston [1]
Mr. George W. Gaines
Mr. Carl E. Bentzel
Mr. B. J. Christiansen

Ohio River Division:
Mr. E. E. Abbott [1]
Dr. S. S. Philbrick

Nashville district:
Col. Henry Walsh
Lt. Col. E. H. Dillon (X)
Mr. V. M. Cone
Mr. G. O. Prados [1]
Mr. A. E. Dykes
Mr. T. E. Eubank
Mr. H. T. Glenn
Mr. John A. Hageman
Mr. R. H. Tuggle
Mr. J. T. Dennison (X)
Mr. John Mathewson (X)

1. *Site boards.*—Mr. Slichter stated in his introductory remarks that boards appointed for the purpose of coordinating the activities of interlocking or cooperating agencies without interference with the functions of these agencies, are now a national pattern, as is the stage presentation of definite project reports on extensive and involved projects.

2. *Review of previous meetings.*—Mr. Weston read a condensed review, prepared in the Mobile district office, of notes of previous conferences and board meetings which appears as appendix A to these minutes.

3. *Functions of the site board.*—The functions of the site board as set forth in agreements of previous meetings were restated by Mr. Lindner and accepted. After discussion it was agreed that there would be no report by the site board.

Mr. Bloor pointed out that the definite project report was actually the site report for this project.

4. *The definite project report.*—(*a*) It was decided that the first phase of the definite project report should be an over-all report covering the project as a whole. It was requested that one representative from each of the two districts be designated to collaborate in the preparation of an outline for this report, to be submitted for review and approval of the board members in about 30 days. This outline will set out the extent and degree of the coverage of each item of this report, and form the basis for assignments of responsibility for the preparation thereof.

(*b*) The submission for approval, in accordance with the current provisions of O. and R., of successive stage reports on each structure as required for construction will be made by the district responsible, in accordance with agreement at the meeting of September 8, 1947.

5. *Funds.*—(*a*) Mr. Weston reported for the Mobile district that $428,000 had been appropriated, $323,000 spent, $105,000 on hand, and a total of $905,700 required for the definite project report.

---

[1] Member of board.
(X) Part time.

(*b*) Mr. Dennison reported for the Nashville district $430,000 appropriated, $115,000 spent, $315,000 on hand, and a total of $350,000 required for the definite project report. (Current funds requests show an estimated cost of $350,000 for the definite project report and $1,000,000 for plans and specifications. It is possible that a portion of the funds proposed for plans will have to be diverted to the preparation of stage definite project reports.)

(*c*) The latest approved estimate of construction cost was given for the Mobile district section as $49,000,000 and for the Nashville district section as $120,000,000. It was decided that current requests for fiscal year 1952 funds would be on the basis of increases to previous estimates in accordance with construction indexes which resulted in a new estimate for the Nashville district portion of $127,200,000 and for the Mobile district of $52,064,000.

* * * * * * *

7. *Status of work.*—(*a*) For the Mobile district, Mr. Weston reported that plans for the Gainesville lock were 97 percent complete, and for Rattlesnake Bend cut-off were 90 percent complete. Mr. Christiansen reported that the hydrology report of the Mobile district must be revised to correlate flood flows experienced since the original work was completed, and to meet present criteria. Colonel Wilson reported that the Mobile district had sponsored legislation enacted by the Mississippi State Legislature enabling the State and various local agencies to make the required assurances for the relocation of highways and utilities, and that similar legislation was expected at the next session of the Legislature of the State of Alabama. In this connection, it was agreed that while the Mobile district would make all initial contacts and secure all documents or other forms of assurances, the follow-through in the final phases of relocations would be by the districts involved, or by combined action. Mr. Wilson, Mr. Gaines, and Mr. Bentzel led a discussion of further studies to determine whether the cost of dredging could be lowered by relocating the locks under the present four-lock set-up, or whether a five-lock scheme would be economical. The necessity for this study was recognized. As a result of inquiry by Mr. Abbott, concerning progress made on the report on 12-foot channel from Mobile to the Tennessee River required by the Rivers and Harbors Act of March 2, 1945, it was agreed that the Mobile district would investigate status of this report.

(*b*) Mr. Prados reported for the Nashville district the progress made on studies made to reduce the number of locks in the canal section, and on the field work to date. Mr. Hageman reported the status of subsurface investigations being made to fix the sites of the structures.

8. *Plans for early construction.*—(*a*) The Mobile district reported that the Gainesville lock and Rattlesnake Bend cut-off were the natural and desirable projects for first construction, with the upstream projects following in order.

(*b*) Mr. Cone stated that, on the Nashville district section, plans for the divide cut could be prepared in the shortest time, and that since all of the canal section and the Bay Springs lock and dam could be built in the probable 6 years required to complete the cut, it would seem to be a logical starting point if appropriations were sufficient to carry the whole project. Discussion showed that appropriations of this magnitude were not to be expected. Inquiry was made by Mr. Slichter as to the feasibility of starting with the canal section if appropriations were small. Discussion brought out the opinion of some present that it may be desirable to plan for construction to start at the lowest lock and proceed upstream, even though this would increase the construction period.

* * * * * * *

(*f*) Channel sizes:

(1) *Initial development.*—Width at bottom, 150 feet in divide cut, 170 feet for canal and river sections. Where dikes are used on both sides of canal sections, their location shall be such as to accommodate the width of channel proposed for the ultimate development. Channel depths for the purposes of the definite project report, 9 feet for the river section and 12 feet for the canal and divide cut (plus 2 feet over depth in rock or where canal requires lining and plus 1 foot over depth elsewhere).

(2) *Ultimate development.*—Width at bottom, 300 feet throughout. Channel depths 12 feet throughout. It was decided that, for the purpose of the report, no engineering and economic studies were to be made, but that the planning should be done in such a manner as not to preclude future development.

* * * * * * *

D. The board meeting in Nashville on September 8, 1947, approved a considerable amount of governing criteria, which are summarized below:

(*a*) The board would coordinate the definite project report, the first phase of which would consist of a site survey to establish a general plan. Upon submission of the definite project report to OCE the functions of the board would end.

(*b*) It was agreed that if construction money were made available, Nashville would present a plan for starting work on the divide cut and Mobile would be in a position to let a contract for Rattlesnake Bend cut-off and Gainesville lock.

(*c*) The structures, including bridges, would be planned for ultimate 2-way navigation, having a bottom width of 300 feet, with initial one-way navigation with passing places at 4-mile intervals. Minimum bottom widths and depths would be as contained in H. D. No. 486, except that passing places would have a minimum bottom width of 240 feet and be provided throughout the full length of the waterway. In the river section, area of the channel shall be at least three times the submerged area of the tow, except for Rattlesnake Bend cut-off. Widening in bends will be in accordance with formula given in appendix II of the 1938 report.

* * * * * * *

Mr. DONNELLY. I, particularly, would like the committee to note how many of the competent engineers of the Corps of Engineers participated in this meeting.

From the Office of the Chief of Engineers we have four representatives; the South Atlantic division, 1; the Mobile district, 5; the Ohio River division, 2; and the Nashville district, 11.

Now, reading from page 3, paragraph 8, of this report, subsection (b) we find this:

"Mr. Cone." Could you identify him for us, please, General?

General PICK. Mr. Cone is engineer in the Nashville district.

Mr. DONNELLY (reading):

Mr. Cone stated that, on the Nashville district section, plans for the divide cut—

and the Congressmen understand the divide cut to be this 100,000,000 cubic-yards-of-earth operation up here—

could be prepared in the shortest time, and that since all of the canal section and the Bay Springs lock and dam could be built in the probable 6 years required to complete the cut, it would seem to be a logical starting point if appropriations were sufficient to carry the whole project. Discussion showed that appropriations of this magnitude were not to be expected. Inquiry was made by Mr. Slichter—

that is this gentleman on your left, is it not, General?

General PICK. That is correct.

Mr. DONNELLY (continuing):

as to the feasibility of starting with the canal section if appropriations were small. Discussion brought out the opinion of some present that it may be desirable to plan for construction to start at the lowest lock and proceed upstream, even though this would increase the construction period.

Now, your 5-year term for construction, General, is predicated upon the likelihood of your getting the whole $179,000,000 in one lump sum, is it not?

General PICK. Mr. Donnelly, I would like for Mr. Slichter to discuss that question with you. He was present at the meeting. I would also like to point out that was an exploratory meeting, that is, neither the approval of the district engineer, nor the division engineer or the Chief of Engineers. Mr. Slichter being present at that meeting I should be very glad to ask him to discuss this question. Mr. Slichter.

Mr. SLICHTER. Mr. Chairman, this site board was organized for the

purpose of coordinating the planning studies on the project, it being in two districts, and naturally falling under the jurisdiction of two division engineers. The site board consists of myself, one representative of the Ohio River division, the South Atlantic division, the Nashville district, and the Mobile district as a body to guide the work.

This particular meeting was a meeting called after 2 years of no concentration of work on the project to examine the preparation of the definite project report which was then under way and to guide the two districts in selecting criteria to follow in their engineer planning in order to avoid a later loss of time if they did not fully approve the methods.

The discussion mentioned here and read by Mr. Donnelly was trying to foresee the best way to do the job in the expectancy that Congress might appropriate funds of an unknown amount, and it has been the past practice on most of our projects to start off with a nominal sum, even our large several hundred million dollar jobs, so that in the light of that it appeared that it might be of advantage if the project funds, the appropriations, were small the first year to gain something on the project by allowing navigation to proceed upward on the Tombigbee from Mobile Bay in order that work could be proceeding and that the waterway could be used for such traffic as might come up at the lower end.

It was fully anticipated that if a large appropriation were made available that the work would start on the cut as mentioned in the first part of the reference paragraph, so it was merely agreed the engineers discuss the criteria and procedures in order to coordinate their plan to achieve this job and have the plans ready and those features of the plans ready which might be made for the appropriations for one current year.

First Phase—Gainesville Lock and Dam

General Pick. Mr. Chairman, may I add to that that the lower part of the Tombigbee waterway will be used and it will start returning dividends if the Gainesville lock and dam is built, because that ties navigation up to Columbus, Miss., and those people are very much interested in having the waterway extended on up there from the present navigable channel of the Warrior system. Therefore, if we start work on the lower end first the first completed link would begin to return dividends on the expenditures made.

Mr. Donnelly. Now, General, you speak of the Gainesville lock and dam. That is this first operation here [indicating], and we hear there is to be a movement of navigation upstream. Let me ask you, if the town of Columbus, Miss., does not have a very small population and has practically no industry which would have occasion to use barges on the waterway, and that Columbus, Miss., at the present time has adequate service by both railroads and highways, is not that correct?

General Pick. Mr. Donnelly, that has no bearing whatsoever on the development of a waterway.

Effect of Construction Time on Benefit-Cost Ratio

Mr. Donnelly. Well, I appreciate the divergence between our viewpoints. The corps' ratio, which the Congressmen have before them, of 1.05 to 1, has to be above 1 to meet the statutory requirement before Congress will appropriate any money. Now, this 1.05 to 1 is the thing the engineers say justifies an appropriation and is based upon a construction period of 5 years. If that is 1.05 to 1, and you change this to a 10-year construction period then the economic justification criterion is frustrated, and the committee has a right to know that.

General Pick. Mr. Donnelly, the extension of time for the construction of projects can be carried to such an extent that no project could ever be justified.

This principle that we use in working up economic justifications for projects is a system which has been in use for many years and has been applicable to all of the waterways in the United States, including our harbors.

Mr. Donnelly. We will show you that there is something wrong with that system as used by the Corps of Engineers to reach their cost-benefit ratio on this very project.

Warrior-Tombigbee Is a Separate Waterway

Now, let me ask you this, General, the Warrior River goes up to Port Birmingham, near Birmingham, Ala., does it not?

General Pick. That is correct.

Mr. Donnelly. And moves down through a series of locks and dams to the confluence with the Tombigbee?

General Pick. That is correct.

Mr. Donnelly. And from there on downstream to Mobile?

General Pick. That is correct.

Mr. Donnelly. Now, the Warror-Tombigbee waterway has been in operation for approximately 20 years or more, has it not, sir?

General Pick. It has been much longer than that.

Mr. Donnelly. 1920, I believe, is when these locks and dams were completed. If it is longer than that I wish you would ask someone to put it in the record.

General Pick. What we know is that all of those works were opened, and that waterway has been used in some of its reaches for many, many years. It was used for navigation before it was canalized.

Mr. Donnelly. That is correct, it services the important steel center of Birmingham, Ala., does it not?

General Pick. That is correct.

Mr. Donnelly. And the Warrior-Tombigbee down to Mobile is entirely separate and apart from the Tennessee-Tombigbee waterway, is it not?

General Pick. It is a separate waterway now.

Demopolis Lock and Dam

Mr. Donnelly. Yes, sir; and your $179,000,000 runs from here at Demopolis [indicating] up to the Tennessee River, does it not, General?

General Pick. Correct.

Mr. DONNELLY. Now, I invite the committee's attention to the town of Demopolis. There is a dam indicated there at 4 [indicating]. The Corps of Engineers submitted a set of figures to the Congress with respect to that Demopolis Dam, and I might say this dam has been the subject of debate on the House floor. House Document No. 276, Seventy-sixth Congress, first session, gives an estimate at the time of that document of $6,750,000, but when the Corps of Engineers came in for construction money it was $16,935,000.

General PICK. When was that authorized?

Mr. DONNELLY. It was authorized in the River and Harbor Act of 1945. Your ENR index was reflected in the increase and the estimated cost that was presented to Congress for fiscal year 1950 was $16,935,000.

General PICK. What was the estimated cost when the project was authorized?

Mr. DONNELLY. $6,750,000.

General PICK. What year was used in making up that estimated cost?

Mr. DONNELLY. General, it would be the year reflected in this document, House Document No. 276, Seventy-sixth Congress, first session.

What is is the width or dimensions of the Demopolis lock and dam?

General PICK. That is 110 by 600, the lock which is being built there now.

THREE EXISTING LOCKS BETWEEN MOBILE AND DEMOPOLIS

Mr. DONNELLY. The question now is apparently not $179,000,000 from Demopolis to the Tennessee River [indicating on map], because that is just a start. There are three locks and dams between Mobile and Demopolis Dam.

What are the dimensions of the three locks, 1, 2, and 3 on the Tombigbee River from Mobile to Demopolis?

General PICK. They are smaller locks. Locks Nos. 1, 2, and 3?

Mr. DONNELLY. Yes, sir.

General PICK. 52 feet by 300, roughly 300.

Mr. DONNELLY. Each of these three locks and dams between Mobile, and Demopolis identified on the map as 1, 2, and 3, are approximately 52 feet by 300 feet?

General PICK. Yes.

Mr. DONNELLY. General, what is the standard-sized lock on the Ohio River?

General PICK. 100 by 600.

Mr. DONNELLY. What is the size of lock which you now propose to Congress for the 10 locks running from Demopolis up to the proposed Tombigbee-Tennessee waterway?

General PICK. 110 by 600.

Mr. DONNELLY. And that, sir, is an increase from the corps' original estimate in the hearings and the House document which was considered by the Rivers and Harbors Committee, of each lock to be 75 feet by 450 feet, is that not correct, sir?

General PICK. Oh, no.

Mr. DONNELLY. What was the size of the locks then?

General PICK. You are referring to the 1938 report and the 1945 report? It was 600 by 110.

Mr. DONNELLY. The 110 by 600 feet was adopted for the proposed waterway here [indicating] so that Mississippi River barges which come down from Cairo and go down to Memphis and down to Shreveport on the Mississippi, can come to New Orleans and go over to Mobile, and then they use the same size locks, 110 by 600 feet as they do on the Ohio River, is that the theory?

General PICK. That is correct.

Mr. DONNELLY. That is correct, is it not?

General PICK. Yes.

Mr. DONNELLY. If Congress were to give you $179,000,000 to complete this project you are going to have to come back to Congress and ask them to increase the size of locks 1, 2, and 3 on the lower Tombigbee River between Mobile and Demopolis to 110 by 600, are you not?

General PICK. That is correct, we already have, with respect to those.

Mr. DONNELLY. This committee increased the dimensions to 110 by 600?

General PICK. Mr. Chairman, I am reading here from the 1945 report, dated September 29, 1945, referred to the Committee on Rivers and Harbors, and ordered to be printed with three illustrations:

> The plan of improvement also presupposes that locks and dams 1, 2, and 3 on the Tombigbee River downstream from Demopolis will be altered or replaced with one or more locks and dams, the structures and locks having 110- by 600-foot chambers with 13-foot depth over the lower miter sills.

Does that answer your question, sir?

Mr. DONNELLY. No; I am familiar with that, because that is the report on which the authorization of Congress is based. This committee has not yet appropriated money for these three locks and dams, has it?

General PICK. We have not asked the committee to appropriate any funds for those, sir.

Mr. DONNELLY. No, sir; but if the corps were to get the $179,000,000, in order to continue to carry out the theory of going up the Tombigbee to the Tennessee, you have to come in and ask for the money for these three locks and dams.

General PICK. Mr. Chairman, this was all gone into very thoroughly before the Committee on Rivers and Harbors and thoroughly explained to them. They understood that development when this project was authorized.

Mr. Donnelly, you are aware of the fact that there are two committees in Congress that handle river and harbor projects. One is the authorizing committee which considers projects before any funds can ever be authorized for appropriation.

Mr. DONNELLY. There is no dispute about that, and every gentleman in this room is aware of it.

General PICK. You could never come before this committee to ask for funds without those funds having been authorized by the Com-

mittee on Public Works, and, in this case, the old Rivers and Harbors Committee.

Mr. DONNELLY. I am well aware of that, General.

REQUESTED FUNDS FOR TOMBIGBEE

General PICK. What is the point you are making?

Mr. DONNELLY. The point is that you tell this committee this year that the corps wants $179,000,000 to complete the proposed Tennessee-Tombigbee project from here [indicating] to here [indicating].

General PICK. Mr. Chairman, I do not think that there is any request before the committee for $179,000,000 for the Tennessee-Tombigbee waterway.

Mr. DONNELLY. But you do have a request, General, for further planning money before this committee. You have asked the Bureau of the Budget for $180,000, and the Bureau of the Budget has estimated to Congress $100,000; is that not correct?

General PICK. Mr. Chairman, those funds that we are asking for there are for preparing a definite project report for this authorized project. It is customary for us to come before this committee to ask for funds not only for that project, but for any other project which is included in the budget submitted to the Congress.

Mr. DONNELLY. That is correct, and one of the factors these gentlemen must consider before allowing this additional $100,000 of planning money is what it is going to cost for the Tombigbee-Tennessee waterway.

General PICK. Mr. Chairman, I have the feeling that there is some thought here that the Chief of Engineers is not properly informing the committee as to projects and about the requests for funds which it submitted to the Budget before coming before the committee. I can assure you, sir, that that is not correct, and it is not the policy of the Chief of Engineers or the Corps of Engineers to mislead this committee in any field that we work in because we are the service agency of the Congress and of the Appropriations Committee and of the Public Works Committee.

I do not understand what the line of questioning is for. I do not understand what the hidden motive is in further pursuing this question, which Mr. Donnelly is pursuing. I do not understand what he is trying to get at because I believe that the information which he is discussing now has been thoroughly considered by the Public Works Committee before this project was authorized.

Chairman CANNON. But not by this committee. The witness will answer the question.

Mr. DONNELLY. I think that the pending question has been answered. His objection was to this line of questioning. I understand that you sustain me, Mr. Chairman?

General PICK. I think that I have answered the question.

Chairman CANNON. The gentleman will proceed.

ECONOMIC THEORY OF PROPOSED WATERWAY

Mr. DONNELLY. This whole theory, the whole economic basis for the construction of the Tennessee-Tombigbee waterway is predicated on the proposition that barges will move down the Mississippi with

the downstream current to New Orleans, and then instead of going back up against the current, they will go across the Mississippi Sound to Mobile, then up the Tombigbee to Demopolis, up the Tennessee to Paducah, and then on up to Cairo, and on up the Mississippi; is that correct?

General PICK. That is possible, if the Tennessee-Tombigbee project is built.

Mr. DONNELLY. Now, General, in order to justify the Tennessee-Tombigbee, you have had to compute a cost-benefit ratio, have you not?

General PICK. We always compute a cost-benefit ratio on every project we are required to survey and render a report on.

Mr. DONNELLY. There are two factors in the cost-benefit ratio; one is how much it will cost the Government per year, and the second is how much savings will inure to the public if the project is constructed; is not that correct?

General PICK. I do not follow that.

Mr. DONNELLY. Will the reporter read the question?

(Question read.)

General PICK. We call them benefits.

Mr. DONNELLY. In any event, the savings that you have used to reach this benefit-cost ratio in 1945 of $1.05 benefit to $1 cost, and $1.13 benefit to $1 cost in 1947, are predicated upon the diversion of the up-bound Mississippi River barge traffic up this proposed Tennessee-Tombigbee waterway, are they not?

General PICK. That is one of the considerations; yes.

Mr. DONNELLY. That is one of the factors in the ratio, is it not?

General PICK. That is correct.

Mr. DONNELLY. As a matter of fact, if we delete the savings that the corps has estimated for the downstream Mississippi traffic going back upstream by the proposed Tombigbee-Tennessee waterway, the ratio falls and the project cannot be justified; is that not true?

General PICK. You mean if you were to prohibit that traffic from going around there?

Mr. DONNELLY. Not "prohibit" it. It is a question of taking it into consideration in your figuring.

What I am seeking to establish for the benefit of the Congressmen is that this proposed Tennessee-Tombigbee is directly dependent upon a diversion of Mississippi barge traffic over here [indicating] and then back up again; is that not correct?

General PICK. A portion of that Mississippi traffic was considered as being capable of moving at a more efficient and less costly operation than going up the Mississippi; that is correct.

Mr. DONNELLY. As a matter of fact, in the figures of the Corps of Engineers, the Corps of Engineers is supposing that many hundreds of thousands of tons of barge traffic will be diverted from New Orleans, and instead of going back up the Mississippi [indicating] will go up the Mobile River [indicating], and go up the Tennessee-Tombigbee; is that not correct?

General PICK. We have included that in our study as one of the factors in working up the economic basis for this project; yes.

Mr. DONNELLY. Exactly, and that is one of the ingredients of the corps' ratio.

That being true, we have talked now about three locks and dams from Demopolis down to Mobile that will have to be widened, and more money will be needed for that.

DIFFICULTY OF NAVIGATION ACROSS MISSISSIPPI SOUND

Let us consider the next step: New Orleans to Mobile.

The barges will have to cross over from New Orleans across the Mississippi Sound and go up to Mobile, and that is a distance, from New Orleans to the junction here that you see in the sound [indicating] of 130 miles, and from that junction to Mobile, 26 miles, or a total of 156 miles; is that not correct sir?

General PICK. I do not know what the distances are, but you pointed out the correct route. I do not know or remember what the figures are.

(Two maps giving desirable detail for such water movements, are herewith inserted.)

Mr. DONNELLY. General, is it not a fact that much of the Mississippi Sound which is a part here of the Gulf Intercoastal Waterway, is exposed to the open seas?

General PICK. It is not exposed to the open seas, sir. It passes through Mississippi Sound. That sound has a chain of islands going across there which give it a tremendous amount of protection, and it is not open-sea navigation.

Mr. DONNELLY. General, isn't it true that the Corps of Engineers here in Washington instructed an engineer to go to Mobile and to New Orleans for the precise purpose of interviewing these barge operators—and his name was Henry Schulte—S-c-h-u-l-t-e—interviewing the barge operators to determine the exact conditions between New Orleans and Mobile?

General PICK. I would like to call upon Mr. Faison in whose department Mr. Schulte works, who is responsible for making up our economic studies. He can answer that question, sir.

SURVEY OF NAVIGATION ACROSS MISSISSIPPI SOUND

Mr. FAISON. Mr. Chairman, when we inaugurate a survey in the field, we organize a field canvass to contact possible shippers and barge operators.

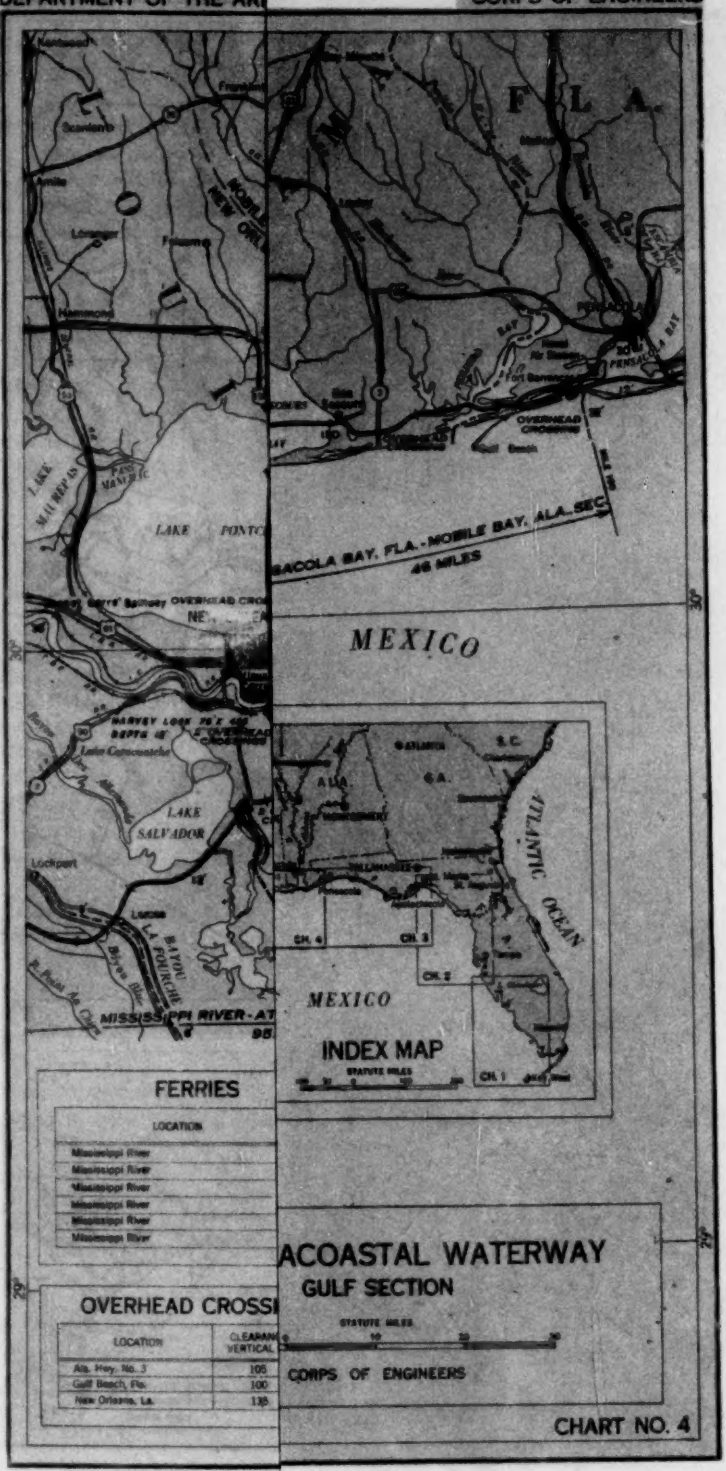
In this particular case we were in the middle of the war. We had to draw people from the field offices, and we selected two or three clerks who were statistical clerks, accustomed to interviewing the field people and getting commercial statistics, and Mr. Schulte was one of those clerks.

Mr. DONNELLY. Was he not a civil engineer?

Mr. FAISON. So far as I know he was not.

Mr. DONNELLY. In a memorandum to Mr. Bottoms, your assistant, and to yourself, did he not sign himself "civil engineer"?

Mr. FAISON. I have never met him. I never saw the man. I have not seen him yet. We have sent him out to contact people in Mobile and New Orleans, and this was the first week of the survey. We inaugurated the survey on the 9th of February, and the next week Mr.


F L A.
MEXICO
LAKE SALVADOR
ATLANTIC OCEAN
MEXICO
INDEX MAP
FERRIES
LOCATION
OVERHEAD CROSSI
LOCATION
Ala. Hwy. No. 3
Gulf Beach, Fla.
New Orleans, La.
ACOASTAL WATERWAY
GULF SECTION
CORPS OF ENGINEERS
CHART NO. 4

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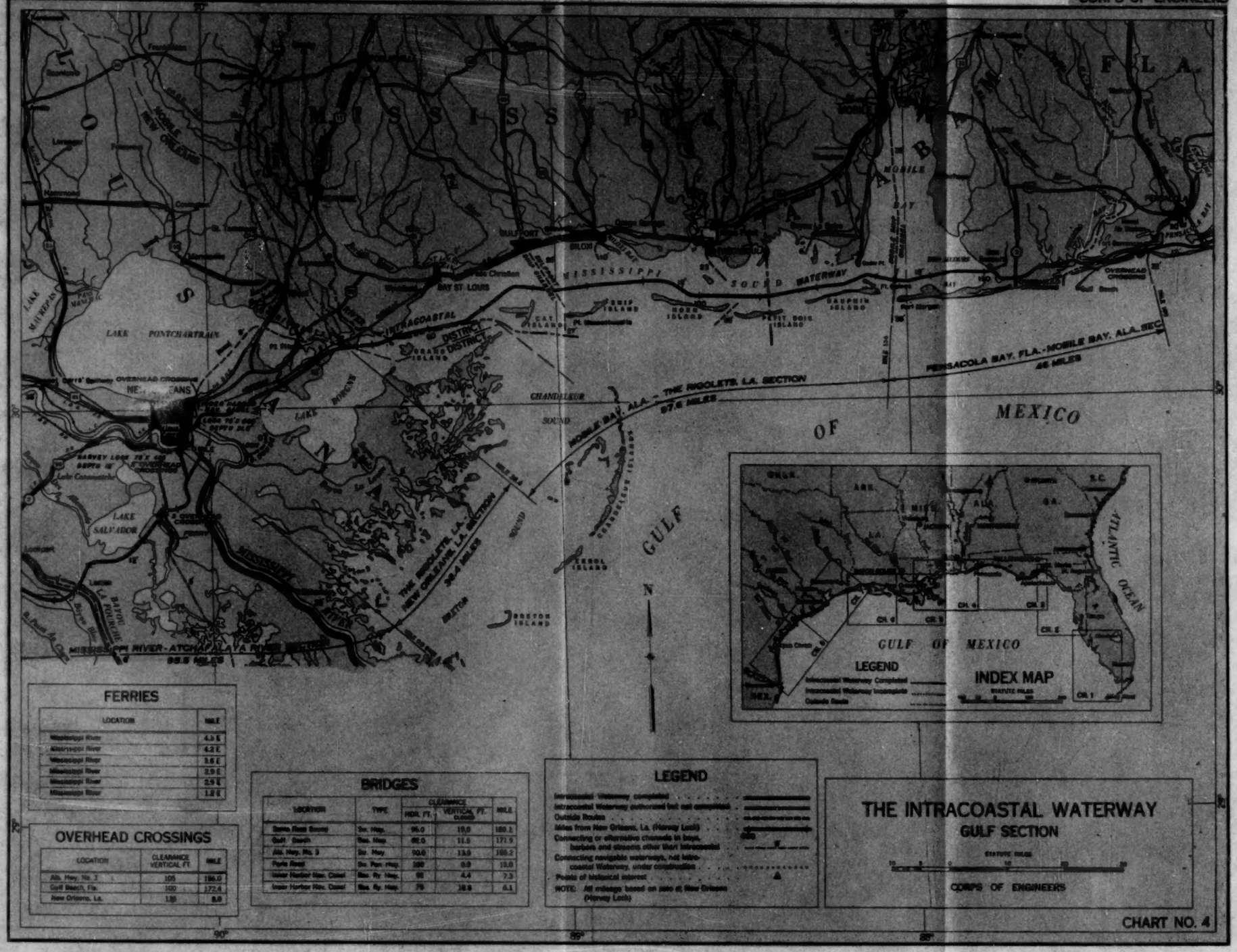
DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS



FERRIES

LOCATION	MILE
Mississippi River	4.3 E
Mississippi River	4.2 E
Mississippi River	3.6 E
Mississippi River	2.9 E
Mississippi River	2.9 E
Mississippi River	1.2 E

OVERHEAD CROSSINGS

LOCATION	CLEARANCE VERTICAL FT.	MILE
Alb. Hwy. No. 3	105	196.0
Gulf Beach, Fla.	100	172.4
New Orleans, La.	135	8.0

BRIDGES

LOCATION	TYPE	CLEARANCE HOR. FT.	CLEARANCE VERTICAL FT. CLOSED	MILE
Bonne Road Bayou	Sw. Hwy.	96.0	19.0	188.1
Gulf Beach	Res. Hwy.	82.0	11.0	171.9
Alb. Hwy. No. 3	Sw. Hwy.	90.0	13.0	196.2
Pyrle Road	Sw. Pen. Hwy.	100	8.0	13.0
Outer Harbor Nav. Canal	Sw. Ry. Hwy.	95	4.4	7.3
Inner Harbor Nav. Canal	Sw. Ry. Hwy.	75	10.8	6.1

LEGEND

- Intracoastal Waterway completed
- Intracoastal Waterway authorized but not completed
- Outside Routes
- Miles from New Orleans, La. (Harvey Lock)
- Connecting or alternative channels in bays, harbors and streams other than intracoastal
- Connecting navigable waterways, not intracoastal Waterway, under construction
- Points of historical interest

NOTE: All mileage based on zero at New Orleans (Harvey Lock)

THE INTRACOASTAL WATERWAY
GULF SECTION

STATUTE MILES

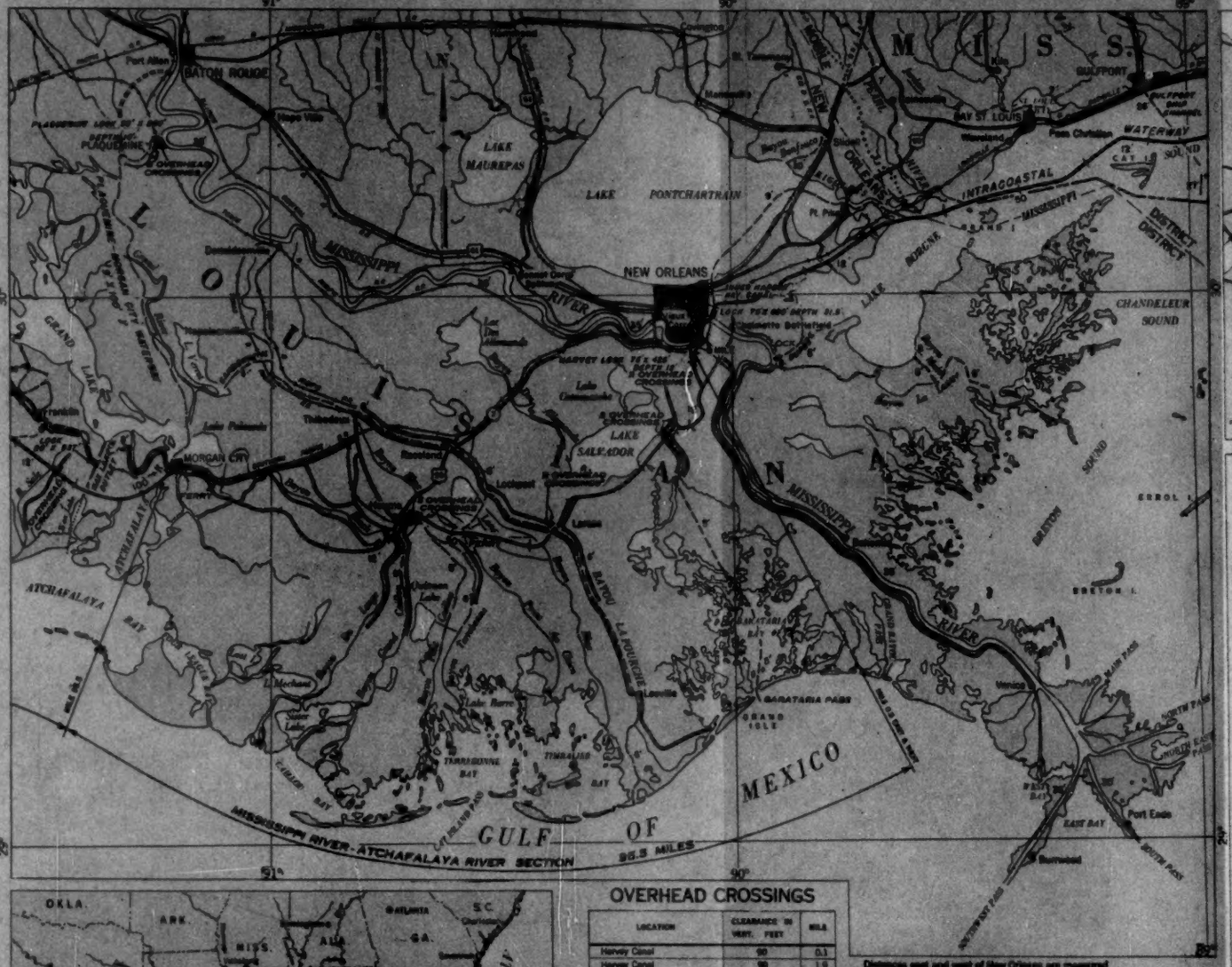
CORPS OF ENGINEERS

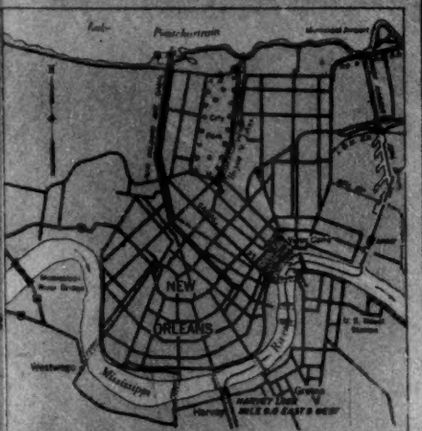
CHART NO. 4

86506 O - 51 (Face p. 30) No. 1

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS





NEW ORLEANS AND VICINITY

STATUTE MILES

BRIDGES

LOCATION	TYPE	CLEARANCE IN FEET HOR.	CLEARANCE IN FEET VERT.	MILE
Paris Road	Pont. Hwy.	100	0.0	13.0
Inner Harbor Nav. Canal	Bas. Ry. Hwy.	91	4.4	7.3
Inner Harbor Nav. Canal	Bas. Ry. Hwy.	75	18.8	6.1
Harvey Canal	Bas. Ry.	75	13.0	0.1
Harvey Canal	Bas. Hwy.	75	11.2	0.1
Bayou Barataria	Str. Hwy.	75	11.6	12.5
Larose, La.	Pont. Hwy.	75	0.0	35.0
Larose, La.	Pont. Hwy.	100	0.0	35.6
Houma, La.	Bas. Hwy.	75	9.1	57.6
Houma, La.	Bas. Hwy.	75	9.1	57.6
Houma, La.	Bs. Ry.	80	7.7	98.9
Bayou Du Large	Pont. Hwy.	75	0.0	99.9
Bayou Sale	Str. Hwy.	75	5.5	113.0

Plaquemine Alternate Section

Plaquemine, La.	Str. Hwy.	106.0	22.0	0.4*
Plaquemine, La.	Bas. Ry.	120	18.8	0.5*
Morgan City, La.	Fixed Hwy.	522.9	54.7	56.3*
Morgan City, La.	Str. R R.	113.0	9.6	56.8*

Distances east and west of New Orleans are measured from Harvey Lock.

Vertical Clearances are above M. L. G. Level.

* Miles from Plaquemine Lock.

OVERHEAD CROSSINGS

LOCATION	CLEARANCE IN VERT. FEET	MILE
Harvey Canal	90	0.1
Harvey Canal	90	1.9
Crown Point, La.	90	10.7
Lafitte, La.	90	14.4
Larose, La.	90	35.0
Larose, La.	90	35.6
Bourg, La.	90	48.8
Houma, La.	90	52.9
Houma, La.	90	57.6
Houma, La.	70	57.7
Houma, La.	90	98.8
Bayou Sale	90	113.0
Plaquemine Alternate Section		
Plaquemine, La.	90	1.6*
Bayou Plaquemine	85	2.1*

FERRIES

LOCATION	MILE
Bourg, La.	48.8
Avoca Island	94.3

Distances east and west of New Orleans are measured from Harvey Lock.

Vertical Clearances are above M. L. G. Level.

* Miles from Plaquemine Lock.

LEGEND

- Intracoastal Waterway completed
- Intracoastal Waterway authorized but not completed
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- Points of historical interest

NOTE: All mileage based on zero at New Orleans (Harvey Lock)

THE INTRACOASTAL WATERWAY

GULF SECTION

STATUTE MILES

CORPS OF ENGINEERS

CHART NO. 5

86506 O - 51 (Face p. 30) No. 2

Schulte made a number of contacts and sent in reports to Mr. Bottoms, who was in charge of the local group at Mobile.

Mr. DONNELLY. So that we can clear up his title—I do not want to have any confusion in the record—Mr. Bottoms is your assistant; is he not?

Mr. FAISON. That is right.

Mr. DONNELLY. I have a memorandum here from your files, February 20, 1945, from Mr. Schulte to Mr. Bottoms, and he signs his name, "engineer, civil." So he was not a clerk; he was an engineer—for the record.

Mr. FAISON. I am sorry. I will have to back up on that. He was doing clerical work for us. We got him for that purpose.

As soon as he got over there we got two calls from our Mobile, New Orleans, offices stating that one of our people was contacting certain barge-line officials and they had complained that he was going around boosting for the Tennessee waterway. That is one thing that we do not do, and do not permit our field people to do. I am sure he thought he was doing the proper thing. We had had no chance to indoctrinate any of them in the purpose of the job.

Mr. DONNELLY. I think that you have answered the question, Mr. Faison.

Mr. FAISON. I would like to proceed just a little further.

I wrote to Mr. Bottoms and asked him to call Mr. Schulte off the contacts with the barge-line people because I did not want to stir up undue opposition to the project. I already knew that some of the leading barge lines were actively opposed to it and were actually organizing in opposition.

Mr. DONNELLY. Mr. Faison, if I may interject—General Pick, that is one of the documents that we are looking for—Mr. Faison now has identified it—his memorandum to Bottoms with reference to Schulte's field study at Mobile and New Orleans.

Mr. FAISON. I am sure that I can find it. I was not in the office the second time that it was asked for. The first time it was not asked for, and I would like, if I may, to put the gentleman who asked for these papers under oath to state that he asked for the Schulte letters and not for our memorandum. I had the memorandum among about 60 papers that I had extracted from the files that I thought were going to apply to this investigation, and I had them over in the Chief of Engineers' office, and I brought all of them back, and I think that I could go right now to my office and find this memorandum. If Mr. Donnelly will tell what he is trying to establish, I believe that I can concede it all. I do remember that I stated, "We want the facts." Is that the memorandum you are thinking of?

Mr. DONNELLY. I have never read it. A member of the staff of this committee examined it last year. We have a reference to it. That is the document that we want.

Mr. FAISON. You recall it, General Pick. We said, "We want the facts."

General PICK. We will find it all right.

Mr. DONNELLY. Mr. Faison, I have here a group of photostats.

EXISTING WATER TRAFFIC—NEW ORLEANS TO MOBILE

These all relate, gentlemen of the committee, to the traffic from Mobile across this sound to New Orleans. They are relevant at this point because this is a dangerous waterway for barge operations, and this is from the very files of the Corps of Engineers. I have excerpted direct quotations. I can put the complete photostat in the record, but I can read the excerpts which I think will be important for expediting the hearing.

Mr. KERR. How many pages?

Mr. DONNELLY. This is the interview by Mr. Schulte, engineer, with the Corps of Engineers, with the barge operators.

Mr. FORD. May I ask a question at this point? In reading from these are you going to identify the barge operators?

Mr. DONNELLY. By name, title, and company.

Mr. FORD. And what kind of operations they run?

Mr. DONNELLY. If it is shown in the Schulte report, I will.

General PICK. I would like to ask Mr. Donnelly what he is trying to establish by the Schulte report.

Mr. DONNELLY. Very simple. I can establish that where you have a tow of barges coming down the Mississippi to New Orleans, in order to use the Tennessee-Tombigbee they have to cross this open water. The engineers contend that this chain of islands protects it from the open seas. The barge operators, the very men that are out there in the boats in this water, say that is not so, that they are exposed to seas as they go through here [indicating] and it is dangerous. As a result, they cannot bring their tows of eight barges, 500 tons to a barge, across the Mississippi Sound [indicating] in one movement. The maximum number of barges they can carry across here is four to five, on the basis of the statements they made to Mr. Schulte of the Corps of Engineers.

Now, if you bring eight barges and one towboat down the Mississippi, you get to New Orleans and you discharge your cargo, and you get a new load and you want to go up the new way that you gentlemen are considering, and if you have to have, instead of one towboat—if you have to have two—and you cannot take your eight barges intact, but you have to bring them in two sections, four and four, the cost will increase to the extent that the savings estimated by the engineers and given to this committee will fall. There will be no savings.

COST OF NAVIGATION ACROSS MISSISSIPPI SOUND

Mr. KERR. Have the engineers determined the cost?

Mr. DONNELLY. Yes; the engineers say that for the New Orleans-Mobile run, 37 cents. That is in the 1945 House document. The barge operators, the men who do the business, $1 a ton; not 37 cents. And with that one figure alone all of the Corps' calculations fall, and so falls this whole Tennessee-Tombigbee.

The barge operators say that they can go across the sound for $1 if they get a return haul. They decrease their operating costs 25 cents per ton, but 75 cents is double what the Corps of Engineers say it will cost these barges from New Orleans to Mobile [indicating].

But now in their work sheets that I have gone into, the Corps of Engineers has carefully met that. They compute two different tows of four barges each, 400 tons to a barge, but they figure one-half tugboats or towboats for this one, and one-half towboat for that one, and that is the kind of reasoning that they have had to use to get these fictitious savings that you will find in the House document.,

I think you should look at them because they are important. They appear here on page 147 of the House document. You will see there savings in tables 18 and 19, and they are fictitious.

You will find in table 18, New Orleans to Mobile, 37 cents, with some mills added to it. You will find below in table 19 a line haul cost per ton, and the savings per ton between New Orleans and Cairo, the very bottom figure on the page, which shows the savings per ton to Cairo, via the Tombigbee, of 70 cents, based on a $2.02 cost upstream Mississippi against $1.32 up the Tennessee-Tombigbee. That is a fictitious figure, as I will demonstrate to you very shortly.

WATER MOVEMENT COSTS ON MISSISSIPPI AND ON PROPOSED WATERWAY

For the last 10 years there have been inserted in the Congressional Record, and in the hearings of Congress, data prepared by the Corps of Engineers, and furnished by them to the proponents of this project. The data were first inserted in hearings in the House committee in 1943.

(These data were printed at pp. 27–30 in the 1943 hearings of the House Rivers and Harbors Committee on Waterway Connecting the Tombigbee and Tennessee Rivers, Ala. and Miss. They are as follows:)

Colonel FERINGA. Mr. Chairman, Mr. Rankin asked me, with your permission, to put into the record the saving in waterway distances to Gulf ports. May I place that table in the record?

The CHAIRMAN. Yes.

(The table of waterway distances to Gulf ports referred to and submitted by the witness is as follows:)

Tennessee-Tombigbee waterway

WATERWAY DISTANCES TO GULF PORTS

From—	To Gulf at New Orleans via Mississippi River	To Gulf at Mobile via Tennessee-Tombigbee	Savings	
			Miles	Percent
Minneapolis-St. Paul	1,718	1,610	108	6
Chicago	1,398	1,290	108	7½
St. Louis	1,043	935	108	10
Cairo	860	752	108	12½
Hickman	824	788	36	4
Pittsburgh	1,841	1,641	200	11
Cincinnati	1,379	1,179	200	14½
Louisville	1,236	1,036	200	16
Paducah	906	706	200	22
Chattanooga	1,370	740	630	46
Wilson Dam	1,165	535	630	54
Junction of Tennessee River and Tombigbee Canal	1,121	491	630	56.2

DISTANCES VIA TENNESSEE-TOMBIGBEE WATERWAY VERSUS EXISTING WATER ROUTES

From—	To—	Distance via present waterways	Distance via Tennessee-Tombigbee	Savings in miles via Tennessee-Tombigbee	
		Miles	*Miles*	*Miles*	*Percent*
Junction of Tennessee River and Tombigbee Canal.	Fulton, Miss	1,711	57	1,654	96.7
Do	Aberdeen, Miss	1,673	95	1,578	94.3
Do	Columbus, Miss	1,635	133	1,502	91.9
Do	Demopolis, Ala	1,507	261	1,246	82.7
Do	Birmingham, Ala	1,687	441	1,246	73.9

Some time ago Mr. Simpson and, I think, Mr. Carter, asked for a comparison of costs, and at that time I referred to an index which is carried by the Engineering News-Record. I would like to put it into the record, because I think it would be in answer to your questions. It is a report of April 22, 1943, which carries a construction-cost index. It uses the year 1926 as a cost of 100 percent. It then gives a tabulation starting in 1931, when the cost had declined to 87.1 percent. The cost declined further in 1932, to 75.4 percent. From there on there is a general rise until we come to the years 1939 and 1940. I would like to state that most of these reports which you are now considering in this bill were written in about that era, some the year before and some a year later. In 1940 the cost index had risen to 116.3 percent; in 1941, to 124 percent, and in 1942 to 132.8 percent.

I ask that the table be incorporated in the record.

The CHAIRMAN. That will be done.

(The table referred to is as follows:)

[From the Engineering News-Record, April 22, 1943]

Construction cost index

[1926=100 percent]

	Percent		*Percent*
1931	87.1	1937	112.7
1932	75.4	1938	113.3
1933	81.8	1939	113.2
1934	95.2	1940	116.3
1935	94.4	1941	124.0
1936	99.2	1942	132.8

Colonel FERINGA. I would like to point out that therefore there is a curve which, in 1926, hit 100 percent. It went down gradually, evidently, until the year 1932, when it was 75.4 percent, and from there on rose gradually.

The question was asked, I think, Mr. Simpson, what the cost would be 2 or 3 years from now. I think it would be entirely conjectural whether that curve would tend to rise, or whether, after the tremendous pressure on business has been removed, after new machinery becomes available in large quantities, it would decline. It might decline. It would be my guess, having done much construction work in the Corps of Engineers, that after the war construction costs will decline, although wages might not decline as much, because there would no longer be the tremendous quantity of work and instead thereof there would be tremendous means. It would be my guess that after the war there will be a decline; and I think that the estimated costs that we have been talking about are a fair index of what they will be.

Mr. CARTER. I think I asked the question which the colonel has ably answered.

Mr. RANKIN. Colonel Feringa, I wish you would insert, at this point, a statement of the comparative average costs of water transportation via existing routes and via the proposed Tombigbee-Tennessee waterway.

(The statement referred to is as follows:)

COMPARATIVE AVERAGE COSTS OF WATER TRANSPORTATION VIA EXISTING ROUTES AND VIA THE PROPOSED TOMBIGBEE-TENNESSEE WATERWAY

The following computations are based on the average performance of a representative tow of one 1,200-horsepower Diesel towboat and 8 barges of various standard types and dimensions loaded with a typical mixed cargo, at 55-percent load factor, of 3,500 revenue tons, to and from locations previously mentioned:

Over-all cost per hour	$21.25
Average speed of tow in slack water (miles)	5½
Cost per mile in slack water	$3.86
Average current in Mississippi River below Cairo (miles per hour)	2½
Cost per mile against 2½ miles per hour current	$7.08
Cost per mile with 2½ miles per hour current	$2.66
Average lockage time:	
Tennessee-Ohio River section 30 minutes	$11
Tombigbee section 45 minutes	$16
Warrior section 1 hour	$21
New Orleans to Cairo via Mississippi River, 860 miles in slack water (no lockages)	$6,273
New Orleans to Cairo via Tombigbee-Tennessee, 908 miles in slack water, $3,504; 24 lockages, $364	3,868
Saving in cost per trip in favor of Tombigbee route	2,405
New Orleans to Paducah via Mississippi River:	
886 miles against current	6,273
46 miles in slack water	177
2 lockages	22
	6,472
New Orleans to Paducah via Tombigbee-Tennessee:	
862 miles in slack water	3,327
22 lockages	342
	3,669
Saving in cost per trip in favor of Tombigbee route	2,803
New Orleans to junction of Tombigbee Canal with Tennessee River via Mississippi River:	
886 miles against current	6,273
261 miles in slack water	1,007
4 lockages	44
	7,324
New Orleans to junction of Tombigbee Canal with Tennessee River via Tombigbee River:	
647 miles in slack water	2,497
20 lockages	320
	2,817
Saving per trip in favor of Tombigbee route	4,507

Similarly the cost comparisons between other points on the inland waterways via the two routes are as follows:

From—	To—	Via Mississippi River			Via Tombigbee River			Saving per trip via Tombigbee River
		Running	Lockages	Total	Running	Lockages	Total	
Mobile	Cairo	$6,875	0	$6,875	$3,221	$364	$3,585	$3,290
	Paducah	7,052	$22	7,074	3,044	342	3,386	3,688
	Tombigbee-Tennessee junction.	7,882	44	7,926	2,214	320	2,534	5,392
Port Birmingham.	Cairo	8,458	279	8,737	2,710	579	3,289	5,448
	Paducah	8,635	301	8,936	2,532	557	3,089	5,847
	Tombigbee junction	9,465	323	9,788	1,702	535	2,237	7,551
Demopolis	Cairo	7,763	32	7,795	2,015	332	2,347	5,448
	Paducah	7,940	54	7,994	1,837	310	2,147	5,847
	Tombigbee junction	8,770	76	8,846	1,007	288	1,295	7,551
Columbus	Cairo	8,257	96	8,353	1,521	268	1,789	6,564
	Paducah	8,434	118	8,552	1,343	246	1,589	6,963
	Tombigbee junction	9,264	140	9,404	513	224	737	8,667
Aberdeen	Cairo	8,403	128	8,531	1,375	236	1,611	6,920
	Paducah	8,580	150	8,730	1,197	214	1,411	7,319
	Tombigbee junction	9,410	192	9,602	367	192	559	9,043
Fulton	Cairo	8,546	224	8,770	1,229	140	1,369	7,401
	Paducah	8,726	246	8,972	1,051	118	1,169	7,803
	Tombigbee junction	9,556	268	9,824	221	96	317	9,507

It should be noted that the cost tables have been prepared using the best figures presently available. An average current of 2½ miles per hour against upstream traffic has been set up for the Mississippi, this rate of flow being assumed in the tables to compensate for the necessary double-tripping through the cutoffs and crossing from bank to bank to avoid breasting the full force of adverse currents. Arbitrary time factors for lockages of one-half hour for Ohio River type; three-fourths hour for the proposed Tombigbee type; and 1 hour for Warrior type locks have been used in the absence of any definite figures therefor and lack of time for having test runs. No time was available for field check hence the figures were prepared from composite office data.

Mr. DONNELLY. The hypothetical savings have been increased and increased and increased by virtue of using, instead of so much a ton, 3,500 tons, then 10,000 tons, and then 14,000 tons, and these engineers will tell you that a 14,000-ton tow cannot go up the Tennessee-Tombigbee.

Mr. FAISON. There is no such statement in our files. It was a statement that a 14-barge tow cannot go up the proposed Tennessee-Tombigbee in one tow without breaking and doubling the lockages, and in the case of 14,000 tons it would have to go through each lock twice.

Mr. DONNELLY. You say that there is no such thing in your files?

Mr. FAISON. That it cannot go up.

Mr. DONNELLY. Colonel Feringa of the Corps of Engineers furnished it to the committee. I have it right here—14,000-ton tow, estimated savings between New Orleans and Cairo, $9,800.

I will give this to each one of you gentlemen.

Mr. FAISON. How could it save if it could not go up there?

Mr. DONNELLY. It is not a question of how it could save; it is a question of how much can be saved.

(The material is in the form of excerpts from the 1949 hearings of the Senate Appropriations Subcommittee considering the Army civil functions appropriation bill, 1950. It appears at pp. 1083–1085 of those hearings and is as follows:)

Representative RANKIN. * * *

Mr. Chairman, in order that the members may have these figures before them, I am inserting four tables here as part of my remarks, which show the savings this project will provide.

As I said, they have been worked out by the Army engineers, and can be thoroughly relied upon.

MULTIPLE PROJECT BENEFITS

Here is a table showing the cost per ton and the savings per ton this project will provide on the fuel bill alone, for upstream traffic:

TABLE 1.—*Comparison of costs per ton of upstream traffic*

From—	To—	Cost via Mississippi per ton	Cost via Tennessee-Tombigbee per ton	Average savings per ton
New Orleans, La	Cairo	$2.02	$1.32	$0.70
	Paducah	2.10	1.26	.84
	Tennessee-Tombigbee junction	2.42	.99	1.43
Mobile, Ala	Cairo	2.39	.95	1.44
	Paducah	2.47	.89	1.58
	Tennessee-Tombigbee junction	2.79	.62	2.17
Port Birmingham, Ala	Cairo	2.96	.95	2.01
	Paducah	3.04	.89	2.15
	Tennessee-Tombigbee junction	3.36	.62	2.74
Demopolis, Ala	Cairo	2.68	.67	2.01
	Paducah	2.76	.61	2.15
	Tennessee-Tombigbee junction	3.08	.34	2.74
Columbus, Miss	Cairo	2.83	.51	2.32
	Paducah	2.91	.45	2.46
	Tennessee-Tombigbee junction	3.23	.17	3.06
Aberdeen, Miss	Cairo	2.88	.46	2.42
	Paducah	2.96	.40	2.56
	Tennessee-Tombigbee junction	3.28	.13	3.15
Fulton, Miss	Cairo	2.93	.41	2.52
	Paducah	3.01	.35	2.66
	Tennessee-Tombigbee junction	3.33	.08	3.25

Here is a table showing the cost, and the savings, on a barge load, or tow, of 3,500 tons.

I might say here, that except on the traffic from the larger cities such as Pittsburgh, Chicago, and Detroit, a majority of the traffic, at least until recently, was handled by these 3,500-ton tows.

TABLE 2.—*Table showing cost per tow of barges carrying 3,500 tons, and showing savings via Tennessee-Tombigbee*

From—	To—	Cost via Mississippi per tow of 3,500 tons	Cost via Tennessee-Tombigbee per tow of 3,500 tons	Average savings per tow of 3,500 tons
New Orleans, La	Cairo	$7,070	$4,620	$2,450
	Paducah	7,350	4,410	2,940
	Tennessee-Tombigbee junction	8,470	3,465	5,005
Mobile, Ala	Cairo	8,365	3,325	5,040
	Paducah	8,645	3,115	5,530
	Tennessee-Tombigbee junction	9,765	2,170	7,595
Port Birmingham, Ala	Cairo	10,360	3,325	7,035
	Paducah	10,640	3,115	7,525
	Tennessee-Tombigbee junction	11,760	2,170	9,590
Demopolis, Ala	Cairo	9,380	2,345	7,035
	Paducah	9,660	2,135	7,525
	Tennessee-Tombigbee junction	10,780	1,190	9,599
Columbus, Miss	Cairo	9,905	1,785	8,120
	Paducah	10,185	1,575	8,610
	Tennessee-Tombigbee junction	11,305	595	10,710
Aberdeen, Miss	Cairo	10,080	1,610	8,470
	Paducah	10,360	1,400	8,960
	Tennessee-Tombigbee junction	11,480	455	11,025
Fulton, Miss	Cairo	10,255	1,435	8,820
	Paducah	10,535	1,225	9,310
	Tennessee-Tombigbee junction	11,655	280	11,375

Some of the operators I am told are now using 10,000 tons. So here is a table showing the cost and the savings this project would provide on a tow of barges carrying 10,000 tons.

TABLE NO. 3.—*Table showing cost per tow of barges carrying 10,000 tons and showing savings via Tennessee-Tombigbee*

From—	To—	Cost via Mississippi per tow of 10,000 tons	Cost via Tennessee-Tombigbee per tow of 10,000 tons	Average savings per tow of 10,000 tons
New Orleans, La	Cairo	$20,200	$13,200	$7,000
	Paducah	21,000	12,600	8,400
	Tennessee-Tombigbee junction	24,200	9,900	14,300
Mobile, Ala	Cairo	23,900	9,500	14,400
	Paducah	24,700	8,900	15,800
	Tennessee-Tombigbee junction	27,900	6,200	21,700
Port Birmingham, Ala	Cairo	29,600	9,500	20,100
	Paducah	30,400	8,900	21,500
	Tennessee-Tombigbee junction	33,600	6,200	27,400
Demopolis, Ala	Cairo	26,800	6,700	20,100
	Paducah	27,600	6,100	21,500
	Tennessee-Tombigbee junction	30,800	3,400	27,400
Columbus, Miss	Cairo	28,300	5,100	23,200
	Paducah	29,100	4,500	24,600
	Tennessee-Tombigbee junction	32,300	1,700	30,600
Aberdeen, Miss	Cairo	28,800	4,600	24,200
	Paducah	29,600	4,000	25,600
	Tennessee-Tombigbee junction	32,800	1,300	31,500
Fulton, Miss	Cairo	29,300	4,100	25,200
	Paducah	30,100	3,500	26,600
	Tennessee-Tombigbee junction	33,300	800	32,500

Here is another table which the Army engineers have worked out showing the cost per tow of barges carrying 14,000 tons, and also the savings which these barges would provide.

As I pointed out, these larger barges are being used more and more as time goes on.

TABLE NO. 4.—*Table showing cost per tow of barges carrying 14,000 tons and showing the savings via the Tennessee-Tombigbee*

From—	To—	Cost via Mississippi per tow of 14,000 tons	Cost via Tennessee-Tombigbee per tow of 14,000 tons	Average savings per tow of 14,000 tons
New Orleans, La	Cairo	$28,280	$18,480	$9,800
	Paducah	29,400	17,640	11,760
	Tennessee-Tombigbee junction	33,880	13,860	20,020
Mobile, Ala	Cairo	33,460	13,300	20,160
	Paducah	34,580	12,460	22,120
	Tennessee-Tombigbee junction	39,060	8,680	30,380
Port Birmingham, Ala	Cairo	41,440	13,300	28,140
	Paducah	42,560	12,460	30,100
	Tennessee-Tombigbee junction	47,040	8,680	38,360
Demopolis, Ala	Cairo	37,520	9,380	28,140
	Paducah	38,640	8,540	30,100
	Tennessee-Tombigbee junction	43,120	4,760	38,360
Columbus, Miss	Cairo	39,620	7,140	32,480
	Paducah	40,740	6,300	34,440
	Tennessee-Tombigbee junction	45,220	2,380	42,840
Aberdeen, Miss	Cairo	40,320	6,440	33,880
	Paducah	41,440	5,600	35,840
	Tennessee-Tombigbee junction	45,920	1,820	44,100
Fulton, Miss	Cairo	41,020	5,740	35,280
	Paducah	42,140	4,900	37,240
	Tennessee-Tombigbee junction	46,620	1,120	45,500

(NOTE.—These computations were prepared by the witness, H. R. Faison, and furnished by him to Colonel Feringa in a memorandum dated May 24, 1946, which contained an important qualification with respect to tows of 7,000 to 14,000 tons. The qualification has a substantial bearing on the entire proposition, and is as follows:)

It will be noted that while the savings per tow are greater for the larger tows, the unit savings per ton are greater for the 3,500-ton tow adopted in the report. The Army engineers' report gives the comparison of costs under the most favorable operating conditions warranted by the limitations of the proposed canal. A tow of 5 barges and 1,000 horsepower towboat is the best and most economical unit for use on a waterway of the proposed dimensions and the most satisfactory and appropriate method of handling the prospective traffic. On the other hand a larger tow of from 7,000 to 14,000 tons pay-load, if traffic were customarily obtainable in those larger units, would have a distinct advantage over a 3,500-ton tow upstream on the existing open Mississippi River route, so that the greater the departure from the optimum tow assumed in the report the less advantage there would be in using the proposed new route. For example, a five-barge tow, averaging 3,500 tons pay-load (including return voyage) would obtain maximum economy from the use of the proposed Tombigbee-Tennessee route. On the open Mississippi a 2,000-horsepower towboat could be used to advantage to move 100 percent more cargo at 50 percent more cost. This type of 2,000 horsepower towboat could not exert its power on the proposed Tombigbee waterway, and could not handle any greater tow than a 1,000-horsepower towboat. The larger tow would move more economically on the open Mississippi but would simply have to be broken up into the five-barge units to navigate the proposed route with a more unfavorable comparison.

H. R. F.

General PICK. What is the point you are making? What are we talking about now?

Mr. DONNELLY. We are talking about the computations by the Corps of Engineers, of the cost per ton up the Mississippi as against the projected cost per ton estimated by the engineers up the Tennessee-Tombigbee.

General PICK. The point that you are making, that a 14,000-ton tow cannot go up the Tennessee-Tombigbee——

Mr. DONNELLY. Not at those rates because it will have to double trip at the locks. It will also have to have auxiliary power.

General PICK. Are you an economist?

Mr. DONNELLY. I have two esteemed and learned economists here, sir.

General PICK. Do you know a 14,000-ton tow could go through a waterway with 600-foot locks?

Mr. DONNELLY. I do not dispute that, but it is a question of how much you are going to save. If your tow has to be broken in half, or broken into four sets to be taken through a lock, and the other portion of the tow has to sit below the lock while your tugboats, river boats, towboats, take the other one through the lock, then time is wasted in coming back, and all of the corps' figures, General, are predicated upon an arbitrary calculation of the number of days—and I can prove it—that it will take a tow to go from this point, New Orleans, up to Cairo.

General PICK. That is one of them.

Mr. DONNELLY. No, sir; costs per hour. These figures that these Congressmen are looking at are based upon costs per hour. If there is any delay at those locks upon the part of any of these tows, these figures fall. We know the Mississippi River figures are good because there are no locks on the Mississippi River.

General PICK. The time for lockage is included in the figures—the time element for each lock is included in the figures.

Mr. DONNELLY. I understand that, and that is done arbitrarily on conjecture, as indicated by Colonel Feringa, and I will show that figure.

Now, back in 1943, Colonel Feringa—and now he is a general; is that not right?

General PICK. That is right.

Mr. DONNELLY. Colonel Feringa made these calculations upon which the Corps' representations to Congress with respect to savings are based.

Mr. FORD. I might say at this point that we ought to include these tables in the record because we are making a lot of references to them, and the record ought to have them in now.

(To preserve the continuity of presentation, the tables have been printed a few pages above.)

ENGINEERS' COMPUTATION OF WATER COSTS ON PROPOSED WATERWAY

Mr. DONNELLY. Here is the genesis of this project right here with respect to savings: Back in November 1943, Colonel Feringa was asked by the proponents, or an advocate of this project, to give him the savings to barge operators per ton that would result from using the Tennessee-Tombigbee instead of the Mississippi for upstream movement, so Colonel Feringa figured it on the basis of over-all cost per hour, $21.25. Then he figured average speed of tow in slack water, 5½ miles, and I understand the engineers have now revised the figure to 4.4 miles an hour.

Average current in the Mississippi River below Cairo, 2½ miles per hour.

Cost per mile against 2½-miles-per-hour current, $7.08.

Cost per mile with 2½-miles-an-hour current—that is down the Mississippi, $2.66.

Average lockage time, Tennessee-Ohio River section, 30 minutes at a cost of $11.

Average lockage time, Tombigbee section—the Tombigbee section at that time was $16 and they have it down to $10 now. The average time lost by tow of barges from Demopolis up the Tombigbee River is given as 45 minutes.

General PICK. That is per lock.

Mr. DONNELLY. That does not include double tripping.

Mr. FAISON. No, sir.

General PICK. That is the time of the lockage.

Mr. DONNELLY. It does not include double lockage, does it, Mr. Faison? It does not include auxiliary power, Mr. Faison?

Mr. FAISON. Yes, for the Mississippi Sound section.

(NOTE.—The lockage figures in the table make no reference to the Mississippi Sound; just to the locks on (1) the Tennessee-Ohio River section, (2) the Tombigbee section, and (3) the Warrior section.)

Mr. DONNELLY. Now, we turn over to the basic calculations which we have here in the table based on time requirements.

Here we find Colonel Feringa stating, "It should be noted that costs have been prepared using the best available figures. An average current of 2½ miles per hour has been set up for the Mississippi, but of course, operators would not breast the full force of that current if slack water were available. An arbitrary time factor of one-half hour for the Ohio River time; three-quarters hour for proposed time on the Tennessee-Tombigbee; one hour for Warrior-type locks." The Warrior-type locks are up here above Demopolis and have nothing to do with the Tombigbee-Tennessee waterway—three-quarters hour for proposed Tombigbee type, and those are these [indicating], and 1 hour for the Warrior-type lock up here.

General PICK. Those are down on the Tombigbee down there. You do not go through the Warrior River locks to go up this way. You go from Mobile up through the locks there at Demopolis. That is the Warrior River system there.

Mr. DONNELLY. Colonel Feringa calls them the Warrior-type locks.

General PICK. That is right. That is the Warrior River system.

Mr. DONNELLY. It is assuming the same type lock down here, and that is the small lock, 52 by 285 feet.

General PICK. That is correct.

Mr. FAISON. Could he give us the date of that information?

Mr. DONNELLY. I did give it, November 3, 1943.

General PICK. That was made before we made this economic study.

Mr. KERR. Off the record.

(Discussion off the record.)

Mr. FORD. Mr. Chairman, Mr. Donnelly has given us this chart; he previously referred to the committee's report, tables 18 and 19; he is reading from some other report. Will you coordinate them so that we will know what you are referring to?

Mr. DONNELLY. Yes, I will be happy to do that. In answer to your question, Congressman, Colonel Feringa put these before the Congress—I have them right here—this is pages 28 and 30 of the Rivers and Harbors House Report, Seventy-eighth Congress, first session, on the improvement of waterways in connection with the Tombigbee River in Alabama and Mississippi, October 20–22, 1943.

Mr. FORD. That identifies that. What is the purpose of that?

Mr. DONNELLY. What was passed out to the committee members are the tables that were put in the record of the hearings before the Senate Appropriations Subcommittee in 1949, and if you would examine each of these photostats you will find that what I am talking about has been constantly used in this table: For instance, here is New Orleans to Cairo, and they still have $2.02; they still have $1.32; and they still have 70 cents (as shown in table 19 of H. Doc. 486, 79th Cong., 2d sess.).

Mr. FORD. And what you are reading from is a more lengthy statement?

Mr. DONNELLY. This [indicating] is where that information came from.

General PICK. Mr. Donnelly, will you admit that was not the report that was submitted to Congress when the project was authorized?

Mr. DONNELLY. I have no way of knowing that, General Pick.

General PICK. Do you know it was not?

Mr. DONNELLY. I have no way of knowing. I do know that the Corps of Engineers used those figures as late as 1949 as the basis of cost of this project.

General PICK. Those same figures?

Mr. DONNELLY. Those figures; right up to 1949 the Congress was given those figures.

Mr. DAVIS. Let me ask you a question, Mr. Donnelly, whether the figures presented by the Corps of Engineers in 1949 were used by somebody in presenting them to the committee at that time?

Mr. DONNELLY. Your question is a good one. I have another photostat here which shows that they contain the representation that they were the tables prepared by the Corps of Engineers.

Mr. DAVIS. Well, now——

Mr. DONNELLY. These tables are the same figures given to the committee.

General PICK. Mr. Chairman, it seems like to me that if we want to examine this project that we ought to go to the project document which was submitted to Congress when the project was authorized. I do not know what use has been made of these figures. I know it was made before the economic study was made, and I do not identify these figures and I did not present them to the Congress. Mr. Donnelly, who presented these figures to the Congress?

Mr. DONNELLY. Colonel Feringa.

General PICK. Colonel Feringa presented them to Congress? Who presented them to Congress?

Mr. DONNELLY. In the 1943 hearings, at page 27, Colonel Feringa asked to insert them in the record.

General PICK. Were these figures in the report submitted by them to the Congress when the project was authorized?

Mr. DONNELLY. The table you have in front of you is referred to in the authorizing document as table 18. These tables in the 1945 authorizing document are predicated upon those figures.

General PICK. Predicated; are they the same figures?

Mr. DONNELLY. I understand they are the same. I have checked them.

General PICK. I have not had an opportunity to check them, so I cannot say.

Mr. FAISON. I deny that categorically; those are not figures that refer to the lock on the Warrior, Warrior type of lock; those figures are not used at all.

Mr. DONNELLY. The committee is interested in the facts. The 1943 hearings are based on the statement of the engineers' estimates.

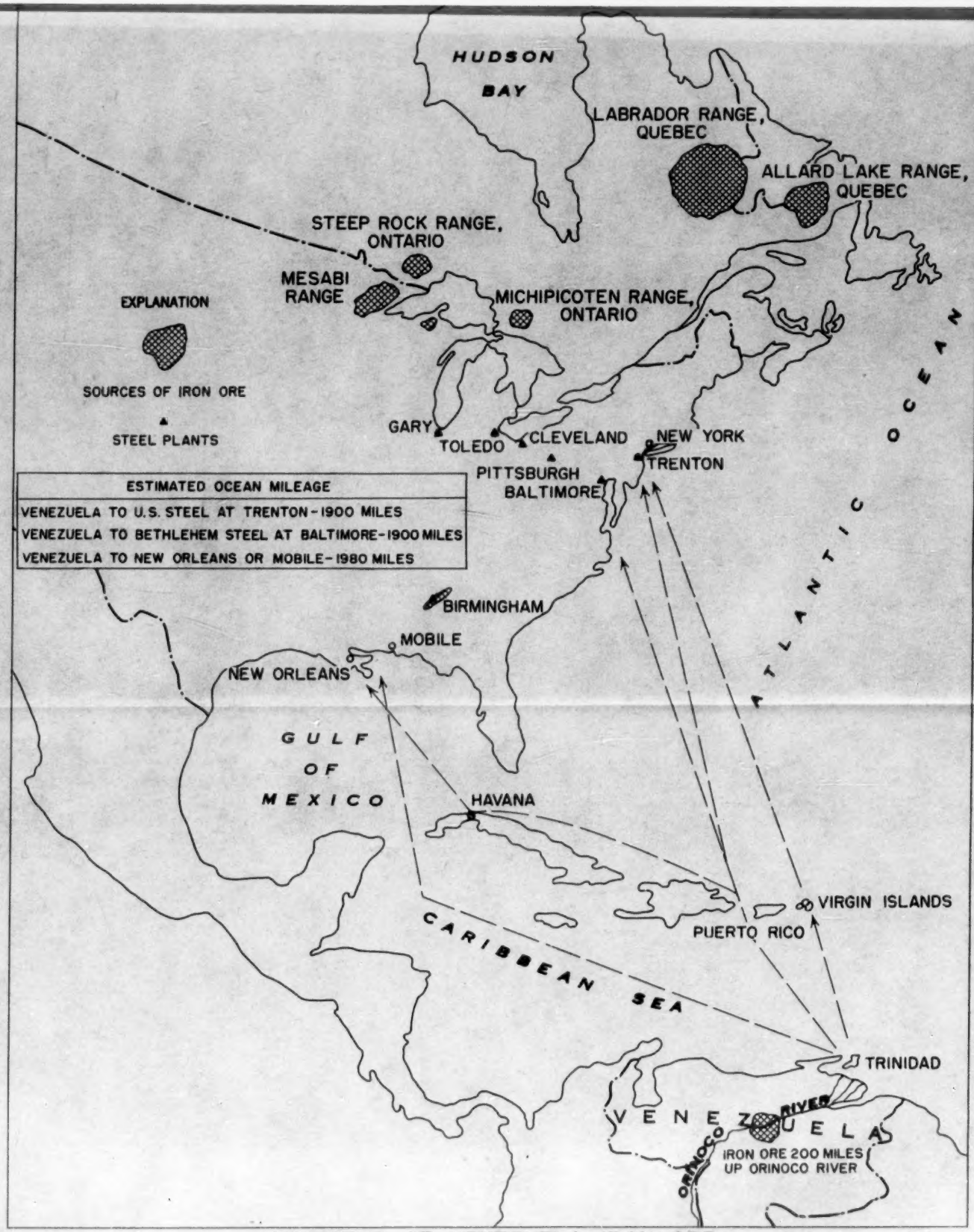
Mr. CANNON. It is customary for the committee to adjourn at about a quarter of 5, and if you will make your arrangements, Mr. Donnelly, we will suspend at a quarter of 5 until tomorrow morning at 10 o'clock, if that is satisfactory with you, Mr. Kerr.

Mr. KERR. That will be satisfactory.

Mr. DONNELLY. Suppose, Congressman, I just pursue this one thought and then stop?

Mr. CANNON. Yes; that will be all right.

General PICK. Mr. Chairman, while Mr. Donnelly is getting his papers together, I am not positive, but I think that the figures that he was reading from shows the smaller type lock that is now in the War-



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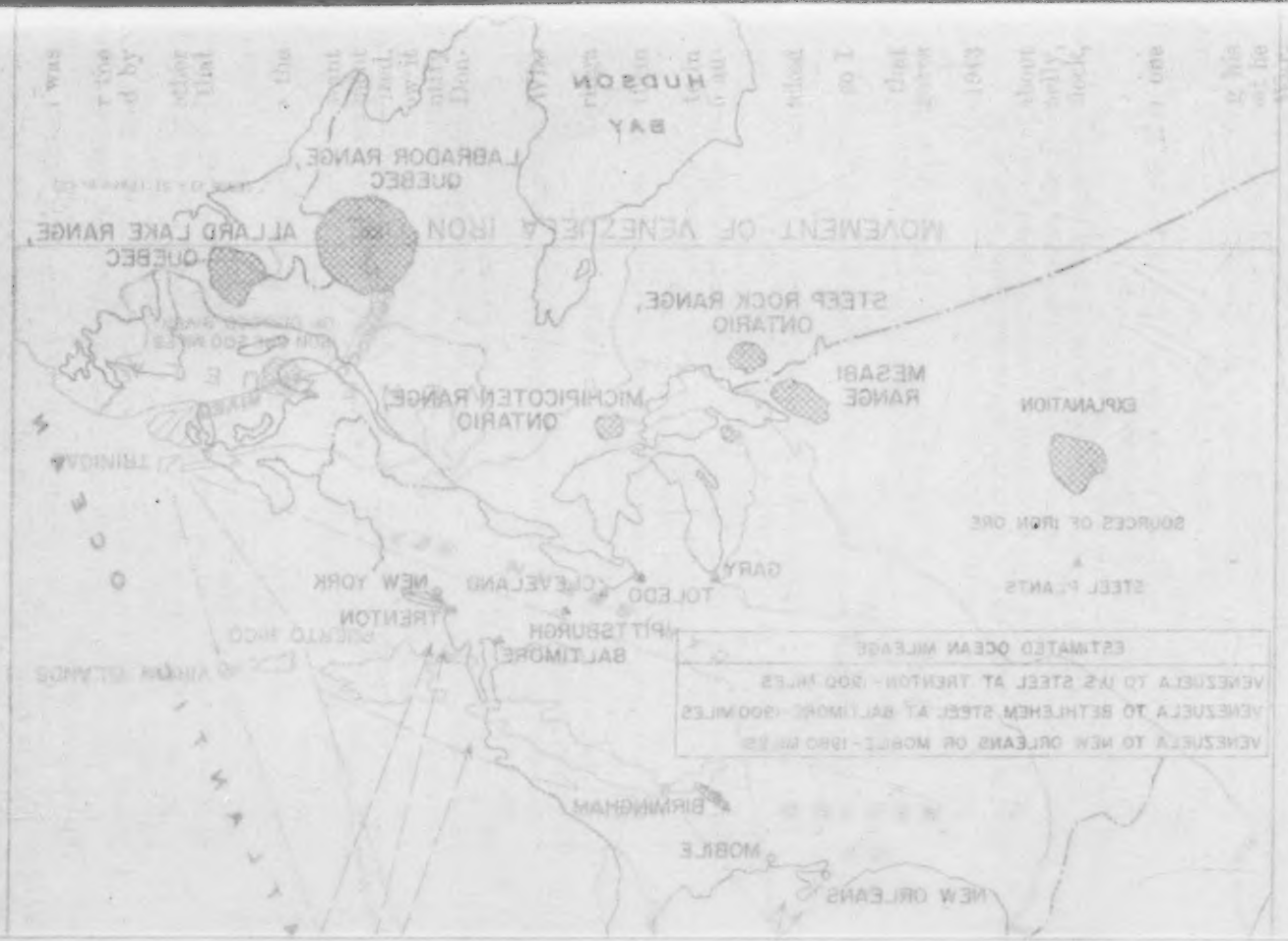
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STEEP ROCK RANGE,
ONTARIO
MESABI
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ONTARIO
EXPLANATION
SOURCES OF IRON ORE
STEEL PLANTS
GARY
TOLEDO
CLEVELAND
NEW YORK
TRENTON
PITTSBURGH
BALTIMORE
BIRMINGHAM
MOBILE
NEW ORLEANS

rior system, and is not the type of lock which was included in the authorized project, 110 by 600 feet.

Mr. DONNELLY. That is correct, General, but you have told the committee that these three locks, 52 by 285 feet, are still in existence on the Mobile River. Therefore it would be necessary to spend millions of dollars to replace those three locks [indicating on map], in addition to the $179,000,000 for the proposed project.

General PICK. Mr. Chairman, we would not have started the Demopolis locks if it had not been foreseen that there would be need to rebuild the lower locks in the Warrior system. They are obsolete, very expensive to operate, and they will have to be rebuilt and have for a long time served their purpose.

Colonel POTTER. And may I point out that we have already rebuilt the Demopolis, under navigational authority to replace three or four locks and dams. The Demopolis lock replaces locks 5, 6, 7, and 8 on the Warrior River [indicating]. That is the main purpose of the Demopolis Dam; each of these will eventually be replaced as will these three down here [indicating] in order to get——

General PICK (interposing). Regardless.

Colonel POTTER. In order to get over to Birmingham.

General PICK. Regardless of whether the Tombigbee project is ever built.

Mr. DONNELLY. Yes; but the fact is that Birmingham is not suffering now as long as the Warrior——

General PICK. Yes, Mr. Chairman, let me say——

Mr. DONNELLY (continuing). It still has sufficient navigation.

MOVEMENT OF IRON ORE FROM VENEZUELA TO UNITED STATES

General PICK. Let me correct you. Birmingham is being handicapped right now, because you realize that the United States Steel is just starting 3 million tons of iron ore into Mobile annually and that the only way to get that up to Birmingham area, where they have a steel mill, is to move it the cheapest possible form of transportation.

You also know that the United States Steel has to go elsewhere for iron ore; they have to go to Venezuela and Liberia, and that is where that is coming from. They have got to save transportation costs in every way that they possibly can in order to get iron ore into the United States.

Mr. DONNELLY. I think the committee may want to follow this statement made by the general here: Here is a map of the Western Hemisphere [indicating]. The deposits of iron ore in the Mesabi Range, of high grade, have been depleted; there is now a lot of low grade, in tremendous quantities.

(The map is herewith inserted.)

General PICK. I am glad to hear you say that.

Mr. DONNELLY. There is a new deposit of iron ore that has been explored right in here; they have found 400,000,000 tons of iron ore here in Labrador [indicating]. But the United States Steel and Bethlehem have in Venezuela, 200 miles up the Orinoco River found a deposit of a billion tons, and they are shipping, I agree with the general, United States Steel is shipping to Birmingham. Is it not a fact, that they have got transportation for that purpose——

General PICK. Mr. Chairman, that is a matter of opinion.

Mr. DONNELLY. Bethlehem Steel has spent something like $30,000,000 at Sparrows Point, Baltimore——

General PICK. Bethlehem.

Mr. DONNELLY. United States Steel is now building a tremendous facility on the Delaware River just above Trenton, and their shortest line from the mouth of the Orinoco to Baltimore and the Delaware River is this line [indicating]. From Venezuela the United States Steel will move in that direction, and they have a favorable rail rate to Pittsburgh and from Baltimore and from Philadelphia. And the same holds true from Mobile up to Pittsburgh in this direction [indicating].

General PICK. Mr. Chairman, the statement about distances, that is, the distances are just about the same to Mobile as to the area around Philadelphia, Pa. The only way that the steel industry can be continued in the Birmingham area is to furnish additional high-grade ore.

I have been helping the United States Steel work out their problems on the Orinoco River; I know their plans; I know that there are present commitments now of 3 million tons of steel to Mobile just as soon as they can get it there; that will continue to go. Now today 3 million tons are there, and 15 million tons are going up the river to Baltimore and the Philadelphia area; that is only 18 million tons out of a tonnage of 101 million tons that was used 2 years ago, and the 10-years' estimate will be 160 million tons of iron ore used in the United States. So, they propose to move every ton that they can possibly move into the United States into their processing area.

Mr. DONNELLY. Last week, one week ago, they had their first movement of iron ore into Sparrows Point near Baltimore.

General PICK. I was invited to the dedication of the project.

Mr. DONNELLY. Under the new operation they have provided docking facilities for the movement of iron ore into coal cars; they can take a whole train load of coal cars that they have brought from western Pennsylvania, when emptied, right to the dock, without even breaking up the train. They can put the iron ore from the holds of the ships right into the cars, and take them back to Pittsburgh.

The railroads have given a rate of $2.61 from Baltimore to Philadelphia to Pittsburgh. If it were shipped to the same points via the Tombigbee-Tennessee waterway, it would cost $4.16 for the same haul. So that Bethlehem and the United States Steel are not going to bring iron ore up to Mobile, up through the Tombigbee on up through the Tennessee to Ohio and on up to Pittsburgh.

(A table showing the comparable rates is as follows:)

Cost of transporting Venezuelan iron ore from seaboard to Pittsburgh via railway and via barge

From Baltimore or Philadelphia to Pittsburgh via railway, rate on iron ore per long ton (2,200), including all rate increases granted by the Interstate Commerce Commission up to Apr. 1, 1951		$2.61
From New Orleans to Paducah, 906 miles, by barge via the Mississippi River route, cost as estimated by the Corps of Engineers	$2.10	
From Mobile to Paducah, 706 miles, by barge via Tombigbee route, cost as estimated by the Corps of Engineers	.89	
From Paducah to Pittsburgh, 934.5 miles, by barge on the Ohio River, at 3.5 mills per ton-mile, cost data from Board of Engineers for Rivers and Harbors	3.27	
Total barge cost, New Orleans to Pittsburgh		5.37
Total barge cost, Mobile to Pittsburgh		4.16

NOTE.—These computations, except for rail, have been made on the basis of Corps of Engineers' data. The water figures are probably, therefore, much lower than actuality. This can result in the still lower barge figure of $3.69 per ton against $2.61 a ton for rail, as follows:

The cost of 3.5 mills per ton-mile offered as the line-haul cost on the Ohio River purports to be an average for upstream and downstream traffic. The cost for upstream movement, therefore, is higher than 3.5 mills. If it be assumed that iron ore is low-grade traffic moving upstream at a lower cost than the average of all traffic, a correction downward may be made on that account. Roughly balancing these two considerations, and calculating the movement of ore on the Ohio at 3 mills per ton-mile, we come to a total cost of $2.80 per ton for the movement from Paducah to Pittsburgh. The exceedingly conservative estimate of cost on the Tombigbee, supplied by the Corps of Engineers, may then be added to give us a lower total figure of $3.69 by waterway to be opposed to $2.61 by railway from Baltimore or Philadelphia to Pittsburgh.

General PICK. But they are moving iron ore into the Birmingham area.

Mr. DONNELLY. They will have rail into here [indicating].

General PICK. How about the finished product?

Mr. DONNELLY. You mean where will the finished product go?

General PICK. Yes.

Mr. DONNELLY. The finished products will be shipped out, some by barge.

General PICK. There is a considerable amount of steel being moved by barge now.

Mr. DONNELLY. No question; are you speaking of finished products?

General PICK. That is right. And you know you can move from Birmingham by barge all the way out to the Mississippi, and up the Mississippi to St. Paul and Minneapolis and Chicago.

Colonel POTTER. One of the biggest movements of traffic is by barge from Pittsburgh for finished pipe.

General PICK. Mr. Chairman, I do not think that that has anything to do with what we are pursuing here now, this project.

Mr. DONNELLY. The only reason I mentioned iron ore, Congressman, is that the Corps of Engineers has over the past several years stated many times that iron ore from Venezuela will have to move up to Pittsburgh via the inland waterway. They cannot possibly do that. I have sought to show the committee that it is economically unfeasible for United States Steel, and Bethlehem, having plants in two places, in Baltimore and in——

General PICK (interposing). Mr. Chairman, in working up the report which authorized the Tombigbee project, no question of movement on up the Warrior system to Tombigbee was given any consideration.

Mr. DONNELLY. That is absolutely correct. There was none of the iron or steel commodities used by the Corps of Engineers at that time, at the time it prepared the material you speak of, but since that time the Corps of Engineers has been referred to on the floor of the House on the subject of iron ore, and especially for the proposition that Venezuelan ore will have to go up the Tombigbee.

(NOTE.—The following letter was subsequently furnished to the committee by United States Steel Co.:)

UNITED STATES STEEL CORP.,
Pittsburgh, Pa., June 13, 1951.

Hon. CLARENCE CANNON,
Chairman, Committee on Appropriations,
House of Representatives, Washington, D. C.

DEAR CONGRESSMAN CANNON: In accordance with the request contained in letter dated June 9, 1951, addressed to Mr. Robert C. Tyson, vice president-comptroller, United States Steel Corp., by Mr. John J. Donnelly, Jr., we are pleased to provide you with the following information:

Near the close of World War II United States Steel engaged in intensive exploration for new sources of high-grade iron ore. As a result of this work, discoveries were made and concessions obtained for iron ore in Venezuela in 1946 and 1947. Among these concessions is one known as Cerro Bolivar, a large deposit located about 95 miles southwest of the junction of the Orinoco and Caroni Rivers.

To determine the most feasible method of mining and transporting the ore, experienced engineering, geological, and operating personnel of United States Steel were asked to conduct surveys. The work of our own people was supplemented by outside consulting engineers and construction companies.

The feasibility of the project was analyzed and late in 1949 Orinoco Mining Co., a subsidiary of United States Steel, was organized to undertake the development of the iron-ore concessions. Orinoco began functioning January 1, 1950, with sufficient capital to proceed with its task.

Among the early acts of Orinoco Mining Co., on January 9, 1950, was the decision to employ General Tyler as an additional consultant concerning the feasibility of dredging a channel in those portions of the Orinoco and Macareo Rivers where deeper water would be necessary to enable passage of large ships. General Tyler was asked to review the work done by previously employed engineers, as well as by the engineers of United States Steel, and to express his opinions as to the accuracy of their conclusions. General Tyler's commission did not include the matter of surveying the feasibility of the construction of a railroad. Engineering studies and estimates of alternate railroad plans were made by other consulting engineers and by United States Steel engineers.

General Tyler confirmed that it is feasible to dredge and maintain a channel in those portions of the Orinoco and Macareo Rivers where deep water is necessary to permit passage of large ships. General Tyler provided United States Steel with an estimate of the cost of dredging and maintaining the necessary channel.

As previously mentioned, Orinoco Mining Co. began business on January 1, 1950. The expenses of the survey by General Tyler were paid out of its capital funds. In addition, from time to time, as the need has developed, the expenditure of additional funds has been authorized for engineering, acquisition of properties which will be required in the mining venture in Venezuela, and other purposes, including the expenditure of funds for initial construction operations. There already exists in Venezuela for the purposes of the over-all project extensive housing, camp sites, transportation, and communication facilities.

With respect to the proposed use of the Orinoco River, it has been found that it will not be necessary to construct either dams or locks and it is not necessary to construct a canal. The work on the river will consist of dredging a channel through bars of sand and silt, which have been deposited in certain sections,

and equipping the channel with navigation aids such as buoys, markers, and lights.

You have inquired as to the practice of United States Steel regarding authorization of expenditures for the initiation of construction prior to the time that the engineering of a proposed construction project has reached the stage that the estimate of the total cost of the project has been made. Generally the practice provides an estimate of total cost of each project prior to authorization of initial construction but, as happened in the case of this Venezuelan project, certain amounts are sometimes authorized to be expended before final engineered estimates. It can be said that the general feasibility of a given project, particularly emergency projects, is based upon the best estimates of cost available at the time even though final engineered estimates upon which appropriations are based follow later. These final engineered estimates may vary from the original estimates.

United States Steel is not bringing ore from Venezuela to the United States at present. Its plans for the future include shipping ore to the ports at Mobile, Baltimore, Philadelphia, and at the Fairless plant at Morrisville, Pa. Other ports may be entered, dependent on future demand.

United States Steel will probably ship to Mobile, en route to Birmingham, an estimated 2,000,000 tons of iron ore from Venezuela annually.

The Fairless plant at Morrisville, Pa., on the Delaware River is presently under construction. It is hoped that operations may commence at this plant in early 1952. The principal facilities being installed include a byproduct-coke plant, two large blast furnaces, an open-hearth-steel plant, a combination slabbing and blooming mill, an 80-inch hot-strip mill, hot-rolled-sheet-finishing facilities, a cold-rolled-sheet mill and cold-rolled-sheet-finishing facilities, a tin-plate-rolling mill and tin-plate-finishing facilities, a billet mill, a bar mill, a skelp mill, and a pipe mill and pipe-finishing facilities.

The capacty of the plant will be 1,800,000 tons of ingots annually and it will consume initially about 3,300,000 tons of ore and coal per year.

Regarding your question as to whether dredging of the Delaware River above Philadelphia is necessary for the successful operation of the Fairless plant, it is recognized that other methods may be made available for the bringing of iron ore and coal to the Fairless works if a deep channel is not available, but the most economical method is that which will permit the passage of oceangoing ships. It has been our experience that economical transportation, particularly in heavy industry, is a determining factor in expansion and success of industrial areas.

It is estimated that a total of 7,000,000 to 13,000,000 gross tons of iron ore and coal will be transported annually by water to the Fairless works, assuming that oceangoing vessels can be used. The tonnage of iron ore included in the foregoing figures is 5,700,000 to 10,400,000 gross tons.

Yours very truly,

M. W. Reed,
Executive Vice President.

Mr. Cannon. The committee will resume in the morning at 10 o'clock.

Wednesday, May 23, 1951.

Chairman Cannon. All right, Mr. Donnelly, we will bring the witnesses in.

Status of Definite Project Report

Mr. Donnelly. Yesterday, gentlemen, we were discussing the appropriations history of the proposed Tombigbee waterway, and we examined the figures prepared by the House Appropriations Committee which reflected that in fiscal year 1949 the Corps of Engineers had asked for construction money and planning money in the amount of $5,735,000.

The Bureau of the Budget in turn had asked Congress, in fiscal year 1949, for $1,500,000 for construction.

Again in fiscal year 1951, the engineers asked the Bureau of the Budget for $2,500,000 for construction.

It was established yesterday through testimony that the definite project report for this project has not yet been completed.

However, Mr. Slichter and Colonel Potter pointed out to the members of the committee that at the time these requests were made the definite project report for the Gainesville lock and dam, which is the first one for this project—and you can see it right here on the map above Demopolis—that the definite project report for that lock and dam had been completed.

I will read from the testimony:

Colonel POTTER. Also, that money was for the Gainesville lock and dam, plans and specifications for which were completed.

Mr. DONNELLY. When was the definite project report completed on the Gainesville lock and dam?

Mr. SLICHTER. Approximately 3 years ago.

Now, gentlemen, I have here a document which refers to Mr. Slichter, the witness here yesterday—and that is you, Mr. Slichter—is it not?

Mr. SLICHTER. That is correct.

Mr. DONNELLY. On July 19, 1950, Mr. Slichter participated in a meeting of a site board for the Tennessee-Tombigbee waterway, Corps of Engineers, United States Army, Nashville district, Nashville, Tenn. Present at that meeting were four representatives of the Office of the Chief of Engineers, including Mr. Slichter. There was 1 representative from the South Atlantic division; 5 representatives from the Mobile district; 2 representatives from the Ohio River district; and 11 representatives from the Corps of Engineers from the Nashville district.

This report shows, under paragraph 7, page 3, Status of Work.

(*a*) For the Mobile district, Mr. Weston reported that plans for the Gainesville lock were 97 percent complete.

Now, Mr. Slichter, is your testimony of yesterday correct that the definite project report on the Gainesville lock was completed approximately 3 years ago?

Mr. SLICHTER. I would like to explain to the committee members just what this thing is we call a definite project report. I think it is being used without definition, and I feel you will better understand it if we tell you what our processes are in proceeding with the work.

The definite project studies are combined in a definite project report. However, the studies are the basis for the engineering and technical approach to a project.

Those studies were started on this project by an organization of a site board in 1947. The job of that board was to coordinate the preparation of a definite project report.

Now, the term "report" does not necessarily mean a legal document signed and sealed and submitted and approved by a court or organization in the Chief's office. It is our job in the Chief's office, as an engineering function, to assure that the corps is constructing the most economical and most feasible project from an engineering standpoint.

The definite project procedure is one set up by our Chief's organization to assure ourselves that we are wisely doing the job. The method of submitting those studies ranges all the way from submitting

definite project studies for a part of an over-all project, such as one lock in this case, to an entire project and the range of the individual studies at any time depends upon the scope of the project.

We have a project, for example, that has 5 years' length before us which we consider an economical construction period. It would not be feasible or efficient to proceed with all the engineering on that project in the first 2 years and then—that is, the definite project studies, and complete them—and then proceed with all the project plans and specifications and complete them and then start to construct the project, simply because an engineering organization would be required much larger than if we spaced the work out. Also, the engineering organization under that circumstance would not be continually employed on an even level of work.

It is our practice, then, on a project of this size—and this has 10 dams and a divide cut—it is our standard practice, and it is carried in O. and R.

Mr. DONNELLY. What does O. and R. mean?

Mr. SLICHTER. O. and R. is short for orders and regulations, which we have in hand for our district engineers for a guide. It is our practice in this case on a project of this size to commence the definite project studies on what we consider to be one of the first items of construction. We proceed with those studies to assure ourselves that the planning for the specifications and the final drawings to be advertised will be sound. That definite project then is submitted through channels for one part of the project.

In this case it was the Gainesville lock—the studies.

After that is approved by our office, and in the interim while it is being approved, our district organization, or engineering organization, are still at work. They are not waiting; they are working on No. 2 project, another lock, or another divide cut. We then return from our office the first studies for the preparation of final plans and specifications for advertisements on the first unit.

The district then takes part of the organization, prepares plans and specifications, and advertises that first unit and the job gets under way and we are off to a start.

At the same time, the organization has finished the definite project studies on the second portion and submits it. So we organize the whole project as a construction job, and we prepare those plans and specifications during, you might say, three-fourths of the life of the construction.

We thereby have a minimum of engineers working on plans and specifications and definite project studies.

We have also the same people working on the plans and specifications who develop the definite project studies. There is no up and down in the organization.

We also are able to take advantage of what we find in the first job that we need to consider in the second job. We may modify some parts of the design which we find are necessary because of certain things—foundations or otherwise—that might arise on the first construction. It proceeds on that basis.

Now, supplementing, as I pointed out before, the definite project report is not a document until you are all through with the job. Then you have it all wrapped up; you are through with it.

In this particular case the records, I think, will show there was some indication there might be appropriations forthcoming for the Tombigbee job, so in order to handle these definite project studies there was a meeting held in the Office of the Chief of Engineers on December 8, 1947, to discuss and agree upon a location, basic elevation and dimensions of the Gainesville lock and dam. At that meeting our district and division organizations——

Mr. DONNELLY. What date was that?

Mr. SLICHTER. December 8, 1947.

Mr. DONNELLY. Was that different from the earlier site selection board report of September 8, 1947?

General PICK. Mr. Chairman, could he withhold that question until he finishes his statement?

Mr. DONNELLY. So we have identification in the record.

Mr. SLICHTER. It is a different date, yes.

Mr. DONNELLY. A different report?

Mr. SLICHTER. A different meeting.

At this meeting the district and/or division echelons submitted to our Chief's office these studies—these definite project studies—which supported and determined the basics for design of the Gainesville lock and dam. That action taken by that group is contained in the report of the minutes and constitutes the definite project report action on the Gainesville lock.

Mr. RABAUT. Off the record.

(Discussion off the record.)

Mr. DONNELLY. Mr. Slichter, the pending question to you is, What do you mean in your testimony of yesterday when you stated that the definite project report on the Gainesville lock and dam was completed approximately 3 years ago?

Mr. SLICHTER. The answer to the question is, the studies and the function, or the action necessary to consummate the definite project studies for the Gainesville lock was completed by this meeting of December 8, 1947.

Mr. DONNELLY. You participated in this meeting of July 19, 1950, at Nashville, Mr. Slichter. What does the site board mean by this statement:

for the Mobile district, Mr. Weston reported that plans for the Gainesville lock were 97 percent complete.

Mr. SLICHTER. The statement meant that the plans were 97 percent completed, and it took 3 percent of effort in order to prepare them for advertising for bids.

PROJECT PLANNING PROCEDURE

Mr. FORD. Mr. Chairman, I would just like to find out this for my own information: Is there a difference between the definite project studies, the definite project report, and the definite plans and specifications? I think that is the crux of the whole matter.

Mr. DONNELLY. I think the committee should know that, because that goes all the way through the 182 projects that we are going to deal with next.

Mr. SLICHTER. That was what I was approaching with my explanation.

Mr. DONNELLY. The Corps of Engineers, in the course of the work by the committee staff for the past year, has consistently used the term "definite project report," and the committee staff has been told consistently by the Corps of Engineers that before the Corps of Engineers asks Congress for money for initial construction, the definite project report has been completed.

Now, Mr. Slichter, is the term "definite project studies" something different from a "definite project report"?

Mr. SLICHTER. The definite project studies are contained in one document—the definite project report.

Mr. DONNELLY. Do the definite project studies precede the definite project report?

Mr. SLICHTER. The definite project report is an assembly of those studies, and necessarily the studies must precede the submission of the document. That document, however, need not be the complete design analysis.

Let me get it in the right terms. I say that the submission of a definite project report may be broken into pieces, for a large project, and there seems to be some feeling here, or some thought brought out in the investigative staff's report that it is necessary for us to complete all these studies and report on a whole project before we start the work, and that is not the case.

Mr. DONNELLY. Just on that point, sir, the Corps of Engineers told the committee in the corps' formal answer of April 23, 1951, on page 2, paragraph 5, the following:

> It is the adopted policy of the Corps of Engineers to complete definite project studies and accurate cost estimates prior to requesting appropriations for construction.

Mr. SLICHTER. That statement is accurate, and it does not say complete the definite project report on the entire Tombigbee waterway.

Mr. DONNELLY. Will the definite project studies include accurate cost estimates for the entire project?

Mr. SLICHTER. It will not all necessarily be completed at the same time.

Mr. DONNELLY. Let me pursue that a little bit.

Congress, when it is asked for initial construction money, considers whether to commit itself to a project. Now, you are indicating it is done piecemeal; that the definite project studies are submitted piecemeal to Congress, so Congress, when it appropriates initial appropriation money and commits itself for the whole project, does not have the benefit of the accurate total estimated cost of the entire project?

Mr. SLICHTER. The definite project studies and report are not a document required by any legislative form of the Federal Government. They are an internal function of the Corps of Engineers. The basis of estimates of cost which are presented to the Congress are contained in the survey report, and the Congress acts on that report.

Mr. DONNELLY. When you say that the Congress acts, are you speaking of the Public Works Committee at the time that it performs the antecedent function of authorizing the project?

Mr. SLICHTER. I am speaking of the time when the project is authorized by the Congress.

Mr. DONNELLY. We are talking about this committee on Appropriations and the question concerns information given by the Corps

of Engineers to this committee in exercising its legislative function to determine whether to commit the Congress to the construction of a project. The information you are talking about was given at the time of the authorizing act.

Mr. SLICHTER. That is correct.

Mr. DONNELLY. This committee is entitled to and must have the accurate cost estimate for the entire project, and for each project, before the Corps of Engineers asks for initial construction money. That is the whole point here.

Mr. SLICHTER. It is the practice each time we go before the committee to give basic information as to the demands of any project, and that information has always been given. And I would like to point out that when we prepare the survey report, in order to cover, there is a contingency with each one of 20 to 30 percent; in this case, we will say 35 percent of the estimate is involved in the contingency. As the project proceeds through the analysis in the project study that contingency item is reduced, because we are finding out more information; we are making designs, and we are finding out more about the project, so the estimate becomes more definite and we do not have this much contingency.

Mr. DONNELLY. Mr. Slichter, you are now stating that at the time the total estimated cost of the project is submitted, the engineers reserve to themselves a leeway, which they call contingencies, which may run as high as 35 percent.

Mr. SLICHTER. Yes. For this project the 35 percent includes the engineering and contingency and is broken down into the amount required to prepare the designs for the job and to supervise construction at that time, the survey, plus the contingency item; the amount required within the contingency alone on this item is approximately 25 percent.

Mr. DONNELLY. This contingency item, then, is a leeway to the Corps of Engineers, running as high as 35 percent. But the whole point here is this committee should have the accurate estimate of the total project cost before it appropriates the initial money for that construction.

Mr. Slichter, you told the committee that this committee has the benefit of accurate cost estimates for the project, but when asked about the 1949 request of the engineers to the Bureau of the Budget for $5,735,000 for construction and planning, you indicate that these definite project studies have to progress. Therefore, at the time that money was requested for the Gainesville lock and dam, should not the committee know the total amount involved for the entire project, not just for one lock, because this one lock is only 1 of 10 in this whole project?

General PICK. May I make a statement, Mr. Chairman?

Mr. KERR. Yes.

General PICK. Mr. Donnelly, are you familiar with the normal practices of engineering and planning estimates of construction in constructing engineering projects?

Mr. DONNELLY. General, I am reasonably so, having handled construction cases involving large amounts of money——

General PICK. Mr. Donnelly——

Mr. MCGRATH. Let him complete, General; you asked him a question.

General PICK. Certainly.

Mr. DONNELLY. What I have sought to do is to learn the methods used by the Corps of Engineers, to learn whether or not those methods differ from methods we normally find in engineering plans and surveys in making estimates. And I find that there are certain terms that ought to be clarified. This committee has been told, through its investigative staff, that the definite project report is, in the concept of the Corps of Enginers, to be the last step, and the step which gives the accurate cost estimates of the total project which are given to the committee before the initial construction money is asked.

General PICK. The practices that I should like to bring to the attention of the committee that the engineers use in all construction work is the normal, standard practice employed by all architects, architectural engineers and contractors in the United States. The truth of the matter is that we employ a tremendous number of, and we have them employed now, of engineers, engineering firms in the United States, to design works. Prior to the time when they can design any works or structures, we must provide them with design criteria; that is the basis of the design. When we give them that they know just exactly what is required of them. Just like any normal, any person who wants to employ an architectural engineer to build him a building, he must give them the general idea of what he wants to go into that building. When that is done the architect or the engineer can have preliminary plans and specifications for his consideration, and then if they are satisfactory he tells them to go ahead and make the final plans and specifications.

Now in all our work we would follow that. On this type of project, the Tennessee-Tombigbee project, because we have in that particular line, we have been in the business so long and we are practically the only people who build locks and dams in the United States, that we have the experienced people to do that. The Chief of Engineers is responsible for all of the functions of the Corps of Engineers, not only just rivers and harbors work.

Our field people, when a project is authorized, are directed to start their preliminary studies. Those preliminary studies are carried on in the field, and they are transmitted to the Office of Chief of Engineers for consideration, comment, or approval.

Now, the definite, what we call the definite project study, is nothing more than collecting together the technical information to be used as the basis, the criteria, if you please, for the designing of the structure.

Now in a structure like this, a portion of that definite project study will deal with the foundation; a part will deal with the lock chamber;

a part will deal with the valves in the lock; a part will deal with the operating mechanism of the lock; a part will deal with the facilities for the discharging of water, when the stage of the stream reaches a higher stage than that which can be discharged through the valves in the dam. All of those things have to be pieced together and these studies completed.

Now when that is all completed it goes into what we call the definite project report. That is the bible these designers take and they keep in front of them at all times when they are designing the various features that go into the project.

When the definite project is completed then you have a definite basis for the designing of the entire project.

Now that is a normal practice in a project of the type we are discussing; it is the normal practice of all construction work in the country. Those are the procedures that we follow and those are the procedures that we have been following for many, many years, the truth of the matter is, something like 127 years, I think it is, on this rivers and harbors works.

Mr. Chairman, I just wanted to state for the record our procedure.

Mr. DONNELLY. General, I am glad you have made that statement, because th corps' methods have puzzled me and have puzzled the investigative staff too, I think. Your explanation here may perhaps help to clarify some of the matters that we were not able to clarify about this.

First of all, you have described the definite project study as nothing more than the collecting together of the technical information to be used as the basis for the designing of the structure.

Now is not that why Congress gives to the Corps of Engineers planning money?

General PICK. That is all planning money is used for; yes.

Mr. DONNELLY. And will those definite-project studies result in the computation of the accurate cost estimates for the entire project?

General PICK. Yes.

Mr. DONNELLY. Have the definite-project studies for the Tennessee-Tombigbee waterway been completed?

General PICK. The definite project study, as I testified yesterday, for the entire Tennessee-Tombigbee project has not been completed; only one unit of it.

Mr. DONNELLY. I understand you, General; I am sure the committee does.

Now the Tennessee-Tombigbee, I think we may analogize to a man desiring to put up an eight-story building. When the owner goes to build an eight-story building, before he gets the steam shovel on the site he has got to know how much the whole building is going to cost.

Now, this Gainesville lock and dam could be likened to having accurate cost estimates for the first story of a building; the owner wants to know how much the whole eight-story building is going to cost when it is completed, not just the first story.

General PICK. Mr. Donnelly, I cannot agree with you; you may be correct about the eight-story building, but if you were going to build 10 eight-story buildings it would not be necessary to complete the design and the estimates of all the eight-story buildings in order to determine the cost of one definite and separate project.

Mr. DONNELLY. General, I follow you perfectly. I think my illustration is very good. We have today the testimony with respect to the Gainesville lock and dam construction that will make the river navigable to Columbus, Miss. [indicating].

Now, as was said yesterday, Columbus, Miss., is a very small town, not the type of town which would justify the barge travel that has to be used in justifying this entire project.

The Census Bureau for the year 1940 shows Columbus, Miss., 13,645. The Census figures for 1950 have not yet come in.

Now, that is the one-story building, if Congress is to commit itself to spend millions of dollars for a little town of 13,645, that is just the first story, but the figures should be developed, showing how much the total cost of the whole project is going to be. The engineers now estimate the total cost at $179,000,000, and the committee staff has estimated it to be $236,000,000.

General PICK. Mr. Donnelly, I do not know what the population of Columbus is, but I have had a delegation from Columbus in my office urging that we build that first lock, because they want to make use of it up there and they say they are actually in need of it.

Mr. DONNELLY. The function of this committee now is to decide whether a town, a little town of less than 14,000 population is entitled to millions of dollars to build the Gainesville lock.

General PICK. That in my opinion is only incidental to the project as a whole, to a project which will give the greatest benefit. If you were to start up there and build a large section of it where it could not be reached I think that would be the wrong way to tackle the job; suppose no more than one dam was ever built, then that one should be one that would be another link in the existing waterway and that would be usable.

GENERAL DESCRIPTION OF THE PROJECT

Mr. DONNELLY. General, I follow you. Now the 10 locks from Demopolis up here to the Divide Cut [indicating], represent a substantial portion of the $179,000,000, do they not?

General PICK. Yes.

Mr. DONNELLY. And the Divide Cut of 39 miles from this point on Mackeys Creek to Yellow Creek, down to the Tennessee River, represents another major factor of cost, does it not?

General PICK. Yes.

Mr. DONNELLY. Do you know approximately what the Divide Cut itself will cost?

General PICK. I do not have those figures.

Mr. SLICHTER. The estimate in 1945 report was $36,000,000; I think the staff's estimate was $66,000,000.

Mr. DONNELLY. $66,000,000 for this Divide Cut of 39 miles. How much is the Gainesville lock and dam——

Mr. FORD (interposing). I think that when counsel refers to costs like that, he ought to indicate the base. In other words, he said $66,000,000 and the previous testimony that the corps estimated it at $36,000,000. I think he ought to specify the figures.

Mr. RABAUT. Yes; they just mentioned the $36,000,000.

Mr. FORD. Yes; I think they ought to indicate whose figures are being used.

Mr. DONNELLY. $36,000,000 is the 1945 estimate of the corps, and $66,000,000 is the 1950 estimate of the staff of this committee.

Now, in the same document I referred to before, July 19, 1950, of the Corps of Engineers, in the minutes of the meeting of the site selection board at Nashville, we find this statement on page 3, paragraph 8:

(*a*) The Mobile district reported that the Gainesville lock and Rattlesnake Bend cut-off were the natural and desirable projects for first construction, with the upstream projects following in order.

(*b*) Mr. Cone stated that, on the Nashville district section, plans for the Divide Cut could be prepared in the shortest time, and that since all of the canal section and the Bay Springs lock and dam could be built in the probable 6 years required to complete the cut, it would seem to be a logical starting point if appropriations were sufficient to carry the whole project. Discussion showed that appropriations of this magnitude were not to be expected. Inquiry was made by Mr. Slichter—

that is the gentleman over here—

as to the feasibility of starting with the canal section if appropriations were small.

Mr. Slichter, by canal section, you mean 41 miles from this point on the Tombigbee River to the Mackeys Creek Divide Cut?

Mr. SLICHTER. The canal section it refers to there is the river and the canal, below the Narrows lock.

Mr. DONNELLY. Yes.

Mr. SLICHTER. From Demopolis up through the narrows.

General PICK. The narrows up to the Divide Cut.

Mr. SLICHTER. The Narrows lock and dam.

Mr. DONNELLY. It is this entire lock and dam going upstream [indicating] before you get into the Divide Cut.

Mr. SLICHTER. Yes.

Mr. DONNELLY. So by the word "canal" is meant 180 miles from Demopolis to the beginning of the canal, and 41 miles from the beginning of the canal to the Narrows lock and dam, a total of 221 miles.

Discussion brought out the opinion of some present that it may be desirable to plan for construction to start at the lowest lock and proceed upstream, even though this would increase the construction period.

PLANNING MONEY FOR PROJECT

Now, General, up to this date this committee of Congress has appropriated $920,000 for the planning of this project. The Corps of Engineers has not completed the plans and as of this time, according to Mr. Slichter's testimony yesterday, slightly over $500,000 of that planning money——

Mr. SLICHTER. That was last July 1950.

Mr. DONNELLY. That is correct. As of July, last year, the end of the fiscal year, about $500,000 was spent. Notwithstanding the fact that Congress has provided the planning money and the Corps of Engineers have not completed the planning, the Corps of Engineers in the fiscal year 1949 asked for $5,735,000 to begin construction to commit the Congress to this project; and again in the fiscal year 1951, the Corps of Engineers asked the Bureau of the Budget for initial construction money in the amount of $2,500,000; and as of today the

Corps has not completed its definite project report to give any final accurate estimate cost figures for the entire project.

General PICK. Mr. Donnelly, you said the Corps of Engineers tried to commit the Congress to this project. I believe the Congress has already been commited to this project because it has been authorized by the Congress and Congress has authorized certain funds to be expended on this project.

Mr. DONNELLY. General, you are absolutely right; it was authorized in the River and Harbor Act of July 24, 1946, and the Congress very wisely took this one step: Construction money was not appropriated. In 1946, when the project was authorized, planning had to be done; that was the first step, and this Appropriations Committee needs and I am sure the engineers want to give this committee the information, the figures showing the results of the planning studies. This committee ought to know how much is involved, how much it is going to cost to move 100,000,000 cubic yards of earth. Congress in first authorizing the project in the authorization act permitted planning by the engineers in order that they compute the total estimated cost for the project. As we understand the engineers said at the time of authorization the project would cost $66,000,000, and the total estimated cost today is $179,000,000.

Mr. SLICHTER. I think the figure you mentioned should be $115,000,000 rather than $66,000,000.

Mr. DONNELLY. You are correct. The 1939 report was $66,000,000.

General PICK. Mr. Chairman, I might point out here just for the record that the procedure we have been and we are following in this particular project, the Tennessee-Tombigbee waterway, is the same procedure that is being followed on every river basin in the United States, and the Corps of Engineers now are working in something like 200 basins.

Mr. DONNELLY. That is correct, General, and we will go into those in the national study of the 182 projects.

The point here is that Congress, I am sure you will agree, is entitled to have the results of the planning and accurate estimates of the total cost for the entire project, before it is asked to vote the initial construction money for the project.

VENEZUELAN IRON ORE

General PICK. Mr. Chairman, as an example of what is done in civilian practice: I was asked as a volunteer to give my opinion to the United States Steel Co., who was tackling the development of the Orinoco River. They asked me if I would recommend somebody to make a study for them, of that project. That project was being studied, and based upon preliminary studies, the United States Steel Co. board of directors authorized a large sum of money to be spent for the development of a channel in the Orinoco River.

General Tyler, a retired engineer was then employed to make a study and to work up a project estimate as to what it was going to cost. In other words, a great industrial organization is following the same procedure with respect to the Orinoco River that we are following here on the Tombigbee waterway, identically the same.

Mr. DONNELLY. With this exception, General: The United States Steel Co. has found a billion tons of iron ore in Venezuela up the

Orinoco River, and they have got to have that channel. But in order for the Congress to say we should have the Tombigbee waterway, for the Government to justify it upon the statutory criteria, the project must be justified on the basis that the savings to the public will exceed the cost to the Government. That is what is before this committee.

Colonel POTTER. May I add a word so the record will be complete: The study was made for the United States Steel Co. so they could be able to decide between the waterway and the railroad, and they selected the waterway over the railroad after the study.

Mr. DONNELLY. I am glad to hear you say that, Colonel, because the United States Steel Co. decided to get the definite construction figures before they made a decision as to whether it should be a waterway or a railroad. Congress would have to——

General PICK (interposing). I beg to differ with you there. Actually the money was approved by the board of directors before that question had been determined.

Mr. DONNELLY. The money for what?

General PICK. For that development down there.

Mr. DONNELLY. You mean for the canal as against the railroad?

General PICK. Yes, before that was done, the board of directors had to take on the project and decide to get the ore out. The question of whether it was going out by water or rail had to be decided after the engineers' studies were made and estimates prepared.

Mr. DONNELLY. Did the board of directors of the United States Steel vote the initial construction money before they knew what the canal was going to cost?

General PICK. Yes.

Mr. DONNELLY. They did?

General PICK. I was told so by the operating vice president of the United States Steel Co.

Mr. DONNELLY. We can check that without too much difficulty.

(NOTE: The letter of United States Steel, printed above at p. 47, deals with this subject.)

APPROPRIATIONS ACTION BY CONGRESS ON TOMBIGBEE

Mr. DONNELLY. Since the authorization act the Corps of Engineers has asked the Congress for planning or construction money, or both, for the fiscal years 1948, 1949, 1950, 1951, and even here now in the fiscal year 1952. The Congress as a whole has considered this project. They considered it in July 2, 1947, when an amendment to appropriate $3,000,000 to begin construction was proposed, and was defeated.

Then also on June 12, 1948, the Congress again considered an item of $1,500,000 to begin construction of this project, but struck it out.

Again, on August 23, 1949, the following year, the Congress as a whole considered an item of $2,500,000 to begin construction of this project, and it was stricken out, I understand in conference.

Again in 1950, Congress considered an amendment proposing an appropriation of $2,000,000 to begin construction on this project; that amendment was defeated on May 8, 1950.

Mr. DAVIS. May I ask you something off the record?

(Discussion off the record.)

Barge Movement of Steel on Warrior River

Mr. Donnelly. General, yesterday at the conclusion of the testimony, Colonel Potter pointed out that finished steel was moving down the Warrior.

Colonel Potter. No; by barge.

Mr. Donnelly. Was moving by barge. We were discussing at that time barge movement to the processing steel center of Birmingham. I made the statement in response to General Pick's question that I did not think much finished steel moved by barge.

I have here the latest statistics from the Corps of Engineers, identified as commercial statistics, water-borne commerce of the United States for the year 1948, annual report, Chief of Engineers, 1949, part 2, Eighty-first Congress, second session; House Document 392.

Are those the latest figures, General?

General Pick. Are they?

Mr. Faison. No.

Mr. Donnelly. This is 1949 that I refer to.

Mr. Faison. 1950.

Colonel Potter. I was talking, and I think my testimony will show that I was talking about barge movement of steel down the Ohio River.

General Pick. What is the date?

Mr. Donnelly. In these statistics that have been furnished by the Corps of Engineers recently—are these the latest statistics, 1949?

General Pick. I do not know; what is that date?

Mr. Donnelly. 1949.

General Pick. No; they are not the latest.

Mr. Faison. This is just out, about 4 days out.

Mr. Donnelly. This is 1950. The 1950 statistics, Mr. Faison tells us, are out only 4 days ago. This is part 2?

Mr. Faison. That is right.

Mr. Donnelly. Colonel Potter's statement was that one of the biggest movements in traffic by barge from Pittsburgh was iron pipe. General Pick and myself were possibly talking about the movement by barge of iron ore and then the finished steel product in the Birmingham area.

General Pick. My reference to steel was the general movement of steel by barge; I do not know how much moves down the Warrior system.

Mr. Donnelly. I think the committee should know this, because——

General Pick (interposing). If I made the wrong impression I would like to correct it, because I do not know exactly what tonnage is moving down the Warrior system.

Mr. Donnelly. The committee I think will recall from yesterday that this Demopolis Dam has been increased to 110 by 600 feet, to the standard Ohio River size lock; and that locks 1, 2, and 3 on the Tombigbee River, below Demopolis, going down to Mobile are only 52 by 285 feet, roughly.

Now I have here statistics for 1949. The total is 395,000 tons moving up the Tombigbee-Warrior waterway. Of that total, 123,903 tons were iron ore. Let us take it the other way, coming back out. Finished steel moving from Port Birmingham out, according to the

1949 statistics, which would be for 1948 freight traffic, shows a total of 1,013,867 tons for all commodities. Of that amount only 15 percent was finished steel products, 162,564 tons. That is broken down into iron and steel: Bar, rod, and slab—bars, rods, coiled, and sheets; nails and wire, woven and not woven; manufactured iron and steel; cast-iron pipe and fittings; pipe, iron or steel. The last item is almost negligible, 969 tons.

General PICK. What is the total tonnage?

Mr. DONNELLY. The total tonnage, finished steel, that is, of production resulting from processing in the Birmingham area, is 162,564 tons, which represents only 15 percent tonnage moving from Birmingham down through this Demopolis area to Mobile.

General PICK. That indicates the waterway is being used for the transportation of steel by barge, and steel products.

Mr. FORD. Mr. Chairman, I think it would be well to include these charts in the record.

Mr. DONNELLY. I will be very glad to do that. I have a photostat copy of them here, and I will put them in the record at this point.

(The statistical statement referred to follows:)

BLACK WARRIOR, WARRIOR AND TOMBIGBEE RIVERS, ALA.

Section included: Mobile River from mouth of Chickasaw Creek to mile 444.6 on the Mulberry Fork, mile 447.6 on the Sipsey Fork, and mile 420.6 on Locust Fork of the Black Warrior River. *Controlling depth:* 8 feet. *Project depth:* 9 feet. *Navigation season:* Entire year

Comparative statement of traffic

Year	Vessel traffic	Rafted	Total	Year	Vessel traffic	Rafted	Total
	Tons	*Tons*	*Tons*		*Tons*	*Tons*	*Tons*
1939	1,589,062	339,159	1,928,221	1944	1,267,672	172,760	1,440,432
1940	1,585,246	305,153	1,890,399	1945	1,328,828	163,668	1,492,496
1941	1,925,092	371,470	2,296,562	1946	1,229,950	141,891	1,371,841
1942	1,950,900	236,377	2,187,277	1947	1,708,615	139,802	1,848,417
1943	1,487,517	165,640	1,653,157	1948	1,973,557	84,947	2,058,504

Freight traffic, 1948

DOMESTIC

	IN-BOUND	*Tons*
075	Coffee	4,792
107	Seeds	98
309	Iron ore	123,903
319	Manganese ore	22,157
337	Petroleum, crude	2,480
345	Sulfur	25,458
401	Logs	7,162
	Logs, barged	*485*
	Logs, rafted	*6,677*
411	Lumber, n. o. s	357
501	Gasoline	147,230
503	Fuel oil	24,197
505	Lubricating oils and greases	15,033
507	Kerosene	6,750
523	Rubber, crude, not reclaimed	4,539
527	Anti-freeze compounds	63
533	Soda products	80
545	Tanning extract	480
571	Tin, pig	2,361
583	Manufactured iron and steel	501
595	Machinery and machines	111
635	Cement	55
653	Woodpulp	387
703	Woodenware, n. o. s	138
759	Sugar, beet or cane	3,785

	IN-BOUND—continued	*Tons*
763	Food products, in cans, and packages	502
	Fruit, canned	*292*
	Juice, fruit	*153*
	Canned food products, n. o. s	*57*
773	Feed, animal and poultry, n. o. s	124
785	Containers, other	66
787	Containers, returned empty	299
789	Scrap iron and scrap steel	455
799	Manufactures and miscellaneous, n. o. s	1,437
	Total	395,000
	OUT-BOUND	
305	Bituminous coal	53,035
323	Clay and bentonite	193,328
327	Sand, building	3,773
329	Stone and rock: broken, ground and crushed	480,310
401	Logs	51,866
	Logs, barged	*19,317*
	Logs, rafted	*32,549*
403	Piling, wooden, rafted	633

Freight traffic, 1948—Continued

	OUT-BOUND—continued	Tons
409	Pulpwood, barged	40,196
413	Cooperage stock	289
503	Fuel, road, and petroleum residual oils	15,931
	Diesel oils	*1,652*
	Fuel oil	*14,279*
507	Benzol	9,799
577	Iron and steel: bar, rod, and slab	52,058
	Bars	*2,911*
	Rods, coiled	*6,765*
	Sheets	*42,382*
581	Nails and wire, woven and not woven	1,018
583	Manufactured iron and steel	69,434
	Band or hoop	*9,536*
	Plate	*1,232*
	Plate, terne and tin	*58,666*
585	Cast-iron pipe and fittings	39,085
	Cast-iron pipe and fittings	*273*
	Pipe and fittings, cast-iron, n. o. s.	*38,812*
587	Pipe, iron or steel	969
589	Tanks	160
749	Beer	284
763	Food products, in cans, and packages	524
779	Drums, iron or steel	915
799	Manufactures and miscellaneous, n. o. s.	260
	Total	1,013,867
	LOCAL	
305	Bituminous coal, n. o. s.	416,772
329	Riprap, stone	808
337	Petroleum, crude	108,505
401	Logs	116,366
	Logs, barged	*71,278*
	Logs, rafted	*45,088*
501	Gasoline	1,227
503	Fuel oil	5,809
799	Manufactures and miscellaneous, n. o. s.	150
	Total	649,637
	GRAND TOTAL	2,058,504

Total ton-miles, 392,989,000.

Trips and drafts of vessels

Draft (feet)	Up-bound				Down-bound			
	Steamers	Motor vessels	Barges	Total	Steamers	Motor vessels	Barges	Total
9		30	108	138		30	367	397
8		37	272	309		36	522	558
7		163	228	391		132	378	510
6		213	228	441		220	539	759
5		666	79	745		661	237	898
4		175	43	218		198	255	453
3	24	596	19	639	26	597	208	831
Less than 3		24	1,727	1,751		36	204	240
Total	24	1,904	2,704	4,632	26	1,910	2,710	4,646
Total net register tonnage	7,069	71,027	982,093	1,060,189	7,659	71,251	984,290	1,063,200

Mr. DONNELLY. These statistics are found on page 671 of the report. At the bottom of page 671, the statistics are broken down into trips and drafts of vessels. The last two columns indicate barges, up-bound, 2,704; down-bound, 2,710, so that you have approximately the same number of barges moving upstream as against those moving downstream.

Now, General Pick, the Tombigbee is a separate and integrated waterway; is it not? This waterway on the Tombigbee from Port Birmingham down to Mobile is a separate integrated inland waterway?

General PICK. It is an established waterway.

Mr. DONNELLY. It is an integrated waterway?

General PICK. I do not know exactly what you mean by integrated.

Mr. DONNELLY. It has no direct connection with the Tennessee-Tombigbee project all the way; does it?

General PICK. Well none, except to the Tombigbee; the Tombigbee comes into the Warrior system, to Demopolis; it is a tributary of that waterway; yes.

Effect of the Size of Locks on Barge Costs

Mr. Donnelly. Now Colonel, yesterday, as I recall at the end of the testimony you were telling about the Demopolis lock and dam, 110 by 600 feet as the standard size lock, as you testified, for the Ohio River.

General Pick. Yes.

Mr. Donnelly. And the size of the locks that the Corps of Engineers proposes to have for this project, the Tennessee-Tombigbee waterway. There are a total of 10 locks on the proposed project; is that correct?

General Pick. That is correct.

Mr. Donnelly. On page 128 of the 1946 hearings in table 1, we find the dimensions of the locks, starting just above Mobile, identified as "1" and reading 1, 2, 3, and 4 at Demopolis, then on up the Warrior River locks 5 through 17 to Port Birmingham. The dimension of those locks is, roughly, 52 by 300 feet, with the exception of the Demopolis lock, 95 by 460. (This table is as follows:)

Table 1.—*Tombigbee-Warrior waterway locks and dams*

Designation of lock	Miles upstream from Mobile [1]	Normal lift (feet)	Dimensions of lock chamber (feet)	Opened to navigation
1	101.6	12.0	52 by 281.9	1908
2	172.6	9.0	52 by 286.0	1914
3	194.6	10.0	52 by 286.0	1914
4	221.6	10.0	52 by 285.6	1908
5	236.6	10.0	52 by 285.6	1908
6	257.1	10.0	52 by 285.6	1908
7	272.6	10.0	52 by 284.7	1903
8	288.6	10.0	52 by 284.7	1903
9	305.6	11.0	52 by 284.7	1903
Tuscaloosa	351.4	30.0	95 by 460.0	1939
13	360.6	11.0	52 by 285.5	1905
14	364.1	14.0	52 by 282.1	1910
15	370.6	14.0	52 by 282.1	1910
16	377.1	21.0	52 by 285.5	1915
17	378.6	72.0	52 by 285.5 [2]	1915

[1] Mileage from foot of Government Street, Mobile. These mileages do not show effect of 9.4 miles shortening caused by the dredging of Sunflower Bend cut-off between mile 77.6 and 89.1.
[2] Double lock.

General Pick, have the sizes of any of these locks, outside of Demopolis lock been changed since 1945?

General Pick. No.

Mr. Donnelly. The locks on the Tennessee-Tombigbee project have been increased from the original proposal of the Corps of Engineers which was 75 by 450 feet, to 110 by 600 feet, the standard size Ohio River lock, so that traffic would come down the Ohio into the Mississippi, downstream on the Mississippi to New Orleans; back across the Mississippi Sound from New Orleans to Mobile, and back up the Tennessee-Tombigbee, through the same size locks, and therefore the same number of barges in the tow they have on the Ohio River.

That is why I pointed out yesterday that these present locks are only 52 by 300, approximately. If the committee should appropriate initial construction money for the Tennessee-Tombigbee project, in order to carry out the plans of the Corps of Engineers, additional money will be necessary to enlarge these locks—1, 2, and 3 locks on the

Tombigbee River from Demopolis downstream to Mobile. That will be at a cost in excess of the $179,000,000 for proposed Tennessee-Tombigbee waterway.

(NOTE.—The following comment on the effect of the size of locks is found in a corps memorandum dated May 16, 1945, from E. E. Bottoms to H. R. Faison:)

The basic analysis and the secondary study were based on the premise that lock-sized tows now operating on the upper Mississippi, Illinois, and Ohio Rivers could move through the proposed improvement without changing tow formation, i. e., it was considered that the route from the Tennessee River to Mobile would be provided with locks 110 by 600 feet. Locks of any lesser dimensions would require reformation and division of the tows thus necessitating additional time for passage. Tentative analysis of the effect locks 75 by 450 feet would have on the savings given in the above table indicate that the average savings would be lowered from $0.14 to $0.64 per ton.

General PICK. Mr. Chairman, it has always been the policy of the Congress to increase the waterway facilities in the United States whenever there was a demand for them. Many waterways have been rebuilt. All our channels and ports have been progressively deepened over the last 127 years. At the beginning when we started the first work in the harbors in the United States, New York had a 17-foot channel over the bar. That is a progressive development, and I do prophecy that the lower locks on the Warrior-Tombigbee River will be enlarged to meet navigation requirements.

Mr. DONNELLY. Now, General, the Corps of Engineers published in 1950 a document entitled "Ohio River Basin Report to the President's Water Resources Policy Commission in 1950."

This report deals with lockage time. We find the locks on the lower Cumberland River, the same size locks we are talking about, locks 1, 2, and 3 on the lower Tombigbee, from Mobile to Demopolis. The locks on the Cumberland River, which the committee will see up here [indicating] occur from Nashville down to the Ohio River. This lock is 52 by 280 feet. And we find here the statement:

With the existing lock sizes on the lower Cumberland River—52 by 280 feet—a tow of this type must make a six-part lockage to pass each lock. Each barge and the towboat must be locked through each lock separately. Total lockage time at each lock, under these conditions, amounts to approximately 3½ hours.

General PICK. Mr. Chairman, I do not see what the Cumberland River lock has to do with the locks on the Tennessee-Tombigbee proposed waterway.

Mr. DONNELLY. I will show you now, General.

The size of these locks on the Cumberland is the same size as the three locks that I have identified as 1, 2, and 3 on the lower Tombigbee River from Demopolis downstream to Mobile.

The committee has noted the estimated saving per ton which the barge tows would enjoy if they went up the proposed Tennessee-Tombigbee River instead of back up the Mississippi River. Yesterday we looked at a table, prepared by the engineers, showing the estimated savings of 70 cents per ton in towing eight barges of 500 tons to the barge, or a total of 3,500 tons, from New Orleans to Cairo.

The engineers say that it costs $2.02 to go from New Orleans back up the Mississippi River to Cairo; that if you go this new route it is going to cost only $1.32 per ton. These computations, however, are based on the actual number of hours required in running time.

Effect of the Size of Locks on Barge Costs

Mr. Donnelly. Now Colonel, yesterday, as I recall at the end of the testimony you were telling about the Demopolis lock and dam, 110 by 600 feet as the standard size lock, as you testified, for the Ohio River.

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6	257.1	10.0	52 by 285.6	1908
7	272.6	10.0	52 by 284.7	1903
8	288.6	10.0	52 by 284.7	1903
9	305.6	11.0	52 by 284.7	1903
Tuscaloosa	351.4	30.0	95 by 460.0	1939
13	360.6	11.0	52 by 285.5	1905
14	364.1	14.0	52 by 282.1	1910
15	370.6	14.0	52 by 282.1	1910
16	377.1	21.0	52 by 285.5	1915
17	378.6	72.0	52 by 285.5 [2]	1915

[1] Mileage from foot of Government Street, Mobile. These mileages do not show effect of 9.4 miles shortening caused by the dredging of Sunflower Bend cut-off between mile 77.6 and 89.1.
[2] Double lock.

General Pick, have the sizes of any of these locks, outside of Demopolis lock been changed since 1945?

General Pick. No.

Mr. Donnelly. The locks on the Tennessee-Tombigbee project have been increased from the original proposal of the Corps of Engineers which was 75 by 450 feet, to 110 by 600 feet, the standard size Ohio River lock, so that traffic would come down the Ohio into the Mississippi, downstream on the Mississippi to New Orleans; back across the Mississippi Sound from New Orleans to Mobile, and back up the Tennessee-Tombigbee, through the same size locks, and therefore the same number of barges in the tow they have on the Ohio River.

That is why I pointed out yesterday that these present locks are only 52 by 300, approximately. If the committee should appropriate initial construction money for the Tennessee-Tombigbee project, in order to carry out the plans of the Corps of Engineers, additional money will be necessary to enlarge these locks—1, 2, and 3 locks on the

Tombigbee River from Demopolis downstream to Mobile. That will be at a cost in excess of the $179,000,000 for proposed Tennessee-Tombigbee waterway.

(NOTE.—The following comment on the effect of the size of locks is found in a corps memorandum dated May 16, 1945, from E. E. Bottoms to H. R. Faison:)

> The basic analysis and the secondary study were based on the premise that lock-sized tows now operating on the upper Mississippi, Illinois, and Ohio Rivers could move through the proposed improvement without changing tow formation, i. e., it was considered that the route from the Tennessee River to Mobile would be provided with locks 110 by 600 feet. Locks of any lesser dimensions would require reformation and division of the tows thus necessitating additional time for passage. Tentative analysis of the effect locks 75 by 450 feet would have on the savings given in the above table indicate that the average savings would be lowered from $0.14 to $0.64 per ton.

General PICK. Mr. Chairman, it has always been the policy of the Congress to increase the waterway facilities in the United States whenever there was a demand for them. Many waterways have been rebuilt. All our channels and ports have been progressively deepened over the last 127 years. At the beginning when we started the first work in the harbors in the United States, New York had a 17-foot channel over the bar. That is a progressive development, and I do prophecy that the lower locks on the Warrior-Tombigbee River will be enlarged to meet navigation requirements.

Mr. DONNELLY. Now, General, the Corps of Engineers published in 1950 a document entitled "Ohio River Basin Report to the President's Water Resources Policy Commission in 1950."

This report deals with lockage time. We find the locks on the lower Cumberland River, the same size locks we are talking about, locks 1, 2, and 3 on the lower Tombigbee, from Mobile to Demopolis. The locks on the Cumberland River, which the committee will see up here [indicating] occur from Nashville down to the Ohio River. This lock is 52 by 280 feet. And we find here the statement:

> With the existing lock sizes on the lower Cumberland River—52 by 280 feet—a tow of this type must make a six-part lockage to pass each lock. Each barge and the towboat must be locked through each lock separately. Total lockage time at each lock, under these conditions, amounts to approximately 3½ hours.

General PICK. Mr. Chairman, I do not see what the Cumberland River lock has to do with the locks on the Tennessee-Tombigbee proposed waterway.

Mr. DONNELLY. I will show you now, General.

The size of these locks on the Cumberland is the same size as the three locks that I have identified as 1, 2, and 3 on the lower Tombigbee River from Demopolis downstream to Mobile.

The committee has noted the estimated saving per ton which the barge tows would enjoy if they went up the proposed Tennessee-Tombigbee River instead of back up the Mississippi River. Yesterday we looked at a table, prepared by the engineers, showing the estimated savings of 70 cents per ton in towing eight barges of 500 tons to the barge, or a total of 3,500 tons, from New Orleans to Cairo.

The engineers say that it costs $2.02 to go from New Orleans back up the Mississippi River to Cairo; that if you go this new route it is going to cost only $1.32 per ton. These computations, however, are based on the actual number of hours required in running time.

(NOTE.—The matter has been resolved into speed of movement ratios, as shown by the following excerpt from a Corps of Engineers memorandum dated May 26, 1945:)

The foregoing speed elements were resolved into three representative elements by retaining those for the Mississippi River downstream and upstream and constructing a composite figure for canalized and still water, the result being:

	Miles per hour
Mississippi River, downstream	8.2125
Mississippi River, upstream	3.1835
Composite, canalized-still water	4.3943

It is estimated that the running cost to the barge line increases or decreases according to the average speed maintained by its tows as an indication of the effort expended in the movement thereof and that for identical loads carried equal distances under various waterway operating conditions the average costs would vary accordingly. With this in mind and the speed shown for the Mississippi River downstream being the fastest, representative of the least operating effort, or 100, the following operating-cost ratios obtain:

Mississippi River, downstream	1.000
Mississippi River, upstream	2.579+
Canalized-still water composite	1.868+

These operating-cost ratios are used subsequently to obtain relationships in commodity unit costs.

Mr. DONNELLY. Now the figures that the Corps of Engineers has furnished the Congress are based on speed of movement; they are based upon the arbitrary estimate of lockage time made in 1943—that was the document I was reading from yesterday—for the Warrior type locks, used in the absence of any definite figures. I personally believe that the Cumberland River and the Tombigbee River figures are comparable, and you will recall the engineers themselves indicated that definitive information was not available.

These same figures show 1 hour for lockage in the Warrior type lock, which would be a tow through the one, two, and three locks of the lower Tombigbee, in their calculation of savings. And yet we find the Corps of Engineers' officials in 1950 saying that it takes 3.5 hours to go through the same size locks on the Cumberland River.

General PICK. Mr. Chairman, I would like to ask Mr. Faison, who has the responsibility for preparing such data for our report to Congress, to answer that question.

Mr. KERR. Very well.

Mr. FAISON. There is no plan to use the three lower locks on the Tombigbee River in this project. The report states that the assumption is that those locks will be enlarged or replaced by one lock, which would be a 600-by-110-foot lock. Those locks are about to fall down, to blow out; one of them was built, I think, in 1896, and the last one in 1915—and I may be wrong about that—but they are somewhere from 35 to 50 years old; they are very low type of construction and it costs more to keep them going than they are worth. And this report here assumes that that was going to take place before this traffic would attempt to use them.

General PICK. Did you identify that report?

Mr. DONNELLY. In 1945, House Document No. 486.

Mr. FAISON. That is right.

Mr. FORD. I think, Mr. Chairman, that the table referred to by counsel on page 128, which shows the number of locks 1 through 17 and the dates they were opened to navigation should be included in the record.

Mr. DONNELLY. We will put that table in the record with the permission of the committee.

(The table is printed above at the beginning of the colloquy on this point.)

Mr. RABAUT. We are going to put all of these statements in the record.

Mr. DONNELLY. Then the question is more than the $179,000,000 for the proposed Tennessee-Tombigbee project [indicating], since more money will be required to enlarge the locks on the lower Tombigbee before the project can operate with the estimated savings.

VALUE OF INLAND WATERWAYS

General PICK. Mr. Chairman, as counsel referred to the document, A Water Policy for the American People, volume I, prepared by the President's Resources Board——

Mr. DONNELLY. That is not the document, General.

General PICK. Was that not it?

Mr. DONNELLY. No, sir.

General PICK. What was the document?

Mr. DONNELLY. The document was the Corps of Engineers' report of 1950, Ohio River Basin Report, President's Water Resources Policy Commission, Office of the Chief of Engineers, Department of the Army, Washington, D. C. That is a different document than the one you have before you, General.

General PICK. They have that data already gone into in this document, I believe, and I would like to quote a short paragraph from A Water Policy for the American People, prepared by the President's Water Resources Board.

Mr. RABAUT. Is that a yearly book?

General PICK. No, sir; this was a Policy Board report which has just recently been published. It is from page 423, paragraph 11, that I wish to read, Mr. Chairman. [Reading.]

> 11. The federally improved inland waterways comprise an important element in the basic transportation structure of the Nation. They supplement other forms of transportation and are not a substitute for the rails, highways, and pipelines for freight movement. The waterways, however, do provide a unique means of transportation and are able to handle certain commodities and movements which are not practicable on other transportation media. Federal activity in waterway improvements, as indicated by this study, has been largely concentrated on a relatively few major waterways which carry the bulk of water-borne commerce. The value of these waterways is indicated by the steady growth of the water-borne commerce, which has taken place when adequate inland navigation facilities have been provided; and by the substantial savings to shippers and receivers of cargo which have accrued from use of these waterways. In addition to the purely commercial value of the inland waterway system, there are noncommercial values which are not revealed by an analysis based on freight movements. For example, it is not practicable to place a monetary value on use of the inland waterways during World War II for military and defense purposes.

That completes the statement.

LESS THAN BARGELOAD SHIPMENTS UNPROFITABLE

Mr. DONNELLY. I think the committee should note at this point that the barge operators on the Mississippi River, the Ohio River, and the Tennessee River, have found that the movement of less than bargeload traffic has been so unprofitable that they have declared an embargo upon it, and that in addition Congress is paying out millions of dollars by way of subsidies to an organization known as the Federal Barge Lines in order to provide barge movements on inland waterways to shippers.

OPERATING LOSSES ON WATERWAYS

The taxpayer pays both ways; first Congress pays for the waterway, and then Congress subsidizes the barge operators, the Federal Barge Lines who move on these rivers. I would like to refer to the annual report of the Inland Waterways Corporation, fiscal year ended June 30, 1950.

For the calendar years 1945 and 1946, there was no operating income.

For the Mississippi system there was a loss in 1945 of $643,000.

In 1946 on the Mississippi system there was a loss of $2,421,000, and on the Warrior system that we were speaking of this morning, running from Port Birmingham down the Warrior and the Tombigbee Rivers to Mobile, there was a loss in 1945 of $201,000; in 1946 a loss of $120,000.

Now, let us move over to fiscal year——

General PICK (interposing). May I make a statement in connection with that, if you are through there?

Mr. KERR. If there is no objection.

General PICK. I was going to make a statement if you are going to another item.

Mr. DONNELLY. No; I am continuing with the fiscal year.

General PICK. Pardon me, Mr. Donnelly.

Mr. DONNELLY. For the fiscal year 1947 we have for the Mississippi system a loss of $2,100,000, and for the fiscal year 1948 for the Mississippi system a loss of $2,451,000; 1947 was the first year that the Warrior River part of these operations showed a profit. This is here [indicating] from Port Birmingham down to Mobile. The profit in 1947 on the Warrior was $8,000, and the profit on the Warrior in 1948 was $139,000.

Let us go to 1949 and 1950, losses again in the red; on the Mississippi system a loss of $1,170,000 in the fiscal year 1949, and in the fiscal year 1950 a loss again, $917,000 on the Mississippi system. It is not just the Mississippi River, it is the Mississippi River and the tributaries above.

The Warrior system, and I want to be sure the committee has the facts, did show a profit in 1949 of $170,000, and did show a profit in the fiscal year 1950 of $183,000. That is, it showed a profit by operation of the Federal Barge Lines which are subsidized by Congress.

I would like at this point to insert these statistics in the record.

Mr. RABAUT. Without objection they may be included in the record.

(The matter referred to is as follows:)

EXCERPTS FROM ANNUAL REPORT OF THE INLAND WATERWAYS CORPORATION FISCAL YEAR ENDING JUNE 30, 1950

Calendar years 1945 and 1946

	1945	1946
Total operating revenues:		
Mississippi system	$7,463,882.17	$5,133,365.43
Warrior system	471,368.96	511,134.15
	7,935,251.13	5,644,499.58
Total operating expenses:		
Mississippi system	8,145,852.78	7,603,920.91
Warrior system	662,367.34	626,272.09
	8,808,220.12	8,230,193.00
Operating income:		
Mississippi system	[1] 681,970.16	[1] 2,470,555.48
Warrior system	[1] 190,998.38	[1] 115,137.94
	[1] 872,968.99	[1] 2,585,693.42
Net income (after "Other income" and "Deductions from gross income"):		
Mississippi system	[1] 643,560.92	[1] 2,421,217.37
Warrior system	[1] 201,673.34	[1] 120,754.79
	[1] 845,234.26	[1] 2,541,972.16

[1] Loss.

Calendar years ending June 30, 1947, and June 30, 1948

	1947	1948
Total operating revenues:		
Mississippi system	$6,175,639.84	$7,400,659.03
Warrior system	643,807.89	835,167.83
	6,819,447.73	8,235,826.86
Total operating expenses:		
Mississippi system	8,353,678.07	9,864,157.79
Warrior system	632,511.51	691,811.78
	8,986,189.58	10,555,969.57
Operating income:		
Mississippi system	[1] 2,178,038.23	[1] 2,463,498.76
Warrior system	11,298.38	143,356.05
	[1] 2,166,741.85	[1] 2,320,142.71
Net income (after "Other income" and "Deductions from gross income"):		
Mississippi system	[1] 2,100,093.65	[1] 2,451,564.25
Warrior system	8,285.16	139,223.09
	[1] 2,091,808.49	[1] 2,312,341.16

[1] Loss.

Fiscal years ending June 30, 1949 and June 30, 1950

	1949	1950
Total operating revenues:		
Mississippi system	$9,194,742.83	$8,701,490.48
Warrior system	1,004,309.16	1,110,011.11
	10,199,051.99	9,811,551.59
Total operating expenses:		
Mississippi system	9,907,794.90	9,616,930.18
Warrior system	795,155.45	926,352.42
	10,702,950.35	10,543,282.60
Operating income:		
Mississippi system	[1] 713,052.07	[1] 915,439.70
Warrior system	209,153.71	183,708.69
	[1] 503,898.36	[1] 731,731.01
Net income (after "Other income" and "Deductions from gross income"):		
Mississippi system	[1] 1,170,203.13	[1] 917,486.38
Warrior system	170,137.87	183,826.49
	[1] 1,000,065.26	[1] 733,659.89

[1] Loss.

Barge Movements on Warrior River in Calendar Year 1949

Mr. Ford. May I make a suggestion with reference to that point? Early in the hearings today Mr. Donnelly referred to a 1949 report of the Army Corps of Engineers and gave commercial statistics on the Mobile, Ala., district as to traffic. It was my understanding that Mr. Faison had in his possession a more recent report to show some data for a different year. I think it would be well if you would ask him to give the same statistics for a year subsequent to those which you have put in the record.

Mr. Donnelly. I would like to very much; and, if I may, I ask the Corps of Engineers for the latest statistics which Mr. Faison tells us were released 4 days ago.

Is this the document?

Mr. Faison. That is right. Maybe you are using the same figures I am; I do not know.

Mr. Donnelly. This document you have just handed me is for the following year. With the permission of the committee, I would like to have photostated and placed in the record comparable figures for the calendar year 1949 contained in the Chief of Engineers' Report of 1950.

Mr. Kerr. If there is no objection, they will go in.

Mr. Ford. If it could be evolved without too much inconvenience, could we have that information brought out now, Mr. Donnelly?

Mr. Donnelly. I am looking for it now.

General Pick. I think Mr. Faison could find it very quickly.

(Discussion off the record.)

Mr. Donnelly. "Freight traffic, 1949: total in-bound, 508,000." That is an increase over the previous year 1948, which was 395,000 tons.

Then we have for the calendar year 1949: "Out-bound traffic, 1,272,459 tons," which is a slight increase over the 1948 traffic out-bound of 1,013,867 tons.

Now, suppose I ask one of these gentlemen to add up these figures on finished steel rather than taking the committee's time to do it, comparable to what we used, and put it in the record at this point. Without objection, let me put that in the record at this point.

Mr. FORD. It would not be too long a process for either Dr. Curtis or someone else to specify those items. Just read them from the chart, and they can total them up later.

Mr. RABAUT. All right.

Mr. DONNELLY. I will do that right now.

Mr. RABAUT. All right.

Mr. DONNELLY. The amounts that are reflected for processed iron ore into some form of iron or finished steel are shown in the 1949 report.

Now, if I may, for the calendar year 1949 read the out-bound tonnage on the Warrior system for processed iron ore, we have "Pig iron, 300 tons; iron steel, tin plate, terneplate scrap, and waste, 29,860 tons; steel ingots, blooms, billets, slabs, bars, sheets, and tin-plate bars, 41,985 tons." "Iron and steel semimanufactures, n. e. c.," what does that mean?

Colonel POTTER. Not otherwise classified.

Mr. DONNELLY. That is n. o. s., "Not otherwise specified." What does n. e. c. mean?

Mr. FAISON. It is the same, sir——

Colonel POTTER. Not elsewhere classified.

Mr. DONNELLY. Two thousand three hundred and two tons, a total of 186,074 tons. The figure for the preceding year, the calendar year 1948, for analogous movement is 163,479 tons, which means an increase of approximately 23,000 tons, which is a small increase for tonnage of this character.

Now, the next figure the committee wants is the in-bound traffic for iron ore.

We have in the calendar year 1949 moving up the Tombigbee-Warrior system 154,593 tons of iron ore and concentrates, against the figure for the preceding calendar year 1948 of 123,903 tons, an increase of 31,000 tons.

Mr. Faison, will you be good enough to ask someone in the group to furnish the committee with the three volumes comprising that report of these statistics, so that we may have them?

Mr. FAISON. I will send for them right now.

Mr. DONNELLY. Not necessarily now, just so you provide them.

Mr. FAISON. You understand the other two volumes are the 1949 fiscal year. One is the fiscal year 1950, and this is the calendar year. They do not quite coincide. I imagine you have already the other two volumes, but I shall be glad to furnish as many as the committee needs.

Mr. DONNELLY. I would like to have a complete set of the latest, if I may.

On this matter of comparative savings per ton——

General PICK (interposing). Mr. Donnelly, are you going to start on another subject now?

Mr. DONNELLY. Yes; I am.

General PICK. I want to remark on your previous statement, if I may at this time.

Mr. DONNELLY. All right, fine.

General PICK. Reference was made to loss of the Inland Waterways Corporation on the tonnage which it carried during the fiscal year 1948, I believe.

Mr. RABAUT. Yes.

Mr. DONNELLY. I think I started in 1945. I did not speak of tonnage; I spoke of loss in dollars.

General PICK. Yes; loss in dollars.

I think it is generally understood by the Congress that the Inland Waterways Corporation is a Government agency for the purpose of pioneering waterways, developing, and experimenting with equipment.

That has been going on since right after World War I.

Now, then, the Inland Waterways Corporation carried—the last tonnage records we have on the Mississippi system where they operate, as near as we could figure, are about 2½ million tons, in the last year available.

The tonnage carried on the Mississippi River system, over which the Inland Waterways Corporation operates, was a total of 130,000,000 tons, as opposed to approximately 2,500,000 tons.

The Inland Waterways Corporation has never been set up as an agency which was supposed to compete with private operators in that they were required to carry on pioneering work and experimental work at the same time for which the Government furnished the funds. This other 130,000,000 tons was carried by private operators who provided their own experimenting and which were not subsidized by the Federal Government, and they are operating at a profit.

Mr. DONNELLY. Does that conclude your statement, General?

Mr. RABAUT. Off the record.

(Discussion off the record.)

General PICK. Yes; that completes my statement, Mr. Donnelly.

Mr. KERR. Are there any other questions?

Mr. DONNELLY. Yes. I think the committee should note with respect to the statement the general has just made that the private barge operators have to pay taxes to Uncle Sam, and the private barge operaors have to make their costs, and they have to make a profit, or they do not stay in business.

On the other hand, the Federal Barge Lines gets its money from Congress. The private barge operators have found that they cannot offer less-than-bargeload shipment to prospective shippers, and the committee will see that in the Tennessee Valley up here [indicating], along the Tennessee River, 90 percent of the shippers up there, outside of petroleum, which is carried in industrially owned barges, 90 percent of those shippers want less-than-bargeload movements, but the private barge operators cannot afford to offer this service; so, Congress has subsidized the Federal Barge Lines to provide barge movements of that character.

Mr. KERR. Do you have a record of those subsidies?

Mr. DONNELLY. We will get into that matter in a little while, Mr. Chairman.

Atomic Energy Commission Has No Particular Interest in Project

I would like at this time to invite the committee's attention to a letter I have just received from the Atomic Energy Commission. This is addressed to Chairman Cannon, dated May 23, 1951, that is, today.

I would like to offer this document for the record.

Mr. Rabaut. All right.

(The matter referred to is as follows:)

United States Atomic Energy Commission,
Washington 25, D. C., May 23, 1951.

Hon. Clarence Cannon,
Chairman, House Appropriations Committee.

Dear Mr. Cannon: Mr. Vechery, chief of the investigating staff, House Appropriations Committee, called our Mr. Kelehan last night and requested that we advise you as to any interest of the Atomic Energy Commission in a project proposed by the Corps of Engineers for the construction of the Tombigbee-Tennessee waterway.

We had occasion to ascertain our interest in this project in October 1950, at the request of Mr. James J. Maloney, of the investigating staff of the House Appropriations Committee. We discussed the project at that time with our Oak Ridge operations office, and it did not appear that the Commission would have any particular interest in the construction of the proposed canal as we anticipated obtaining little material over the proposed route. As you no doubt know, the use of natural gas at Oak Ridge has very substantially reduced the required coal shipments to Oak Ridge. There have been no developments since last fall which would warrant any change in our previous conclusions.

If there is any additional information which we can supply, we will be pleased to do so.

Very truly yours,

M. W. Boyer, *General Manager.*

General Pick. Mr. Chairman, may I ask counsel a question?

Mr. Kerr. Yes, sir.

General Pick. Mr. Donnelly, are you presenting that letter to show that the Corps of Engineers has included any tonnage in any of its studies of the Tennessee-Tombigbee River as being tonnage which would go to the Atomic Energy Commission?

Mr. Donnelly. I believe that the Corps of Engineers in the estimated barge movements that would move up the proposed project have taken into consideration barges which would move up the Tennessee River. Whether they were to be destined to Oak Ridge or or not, I do not know. My purpose in putting this letter in the record is that a number of speeches have been made on the floor of the House of Representatives to the effect that the Atomic Energy Commission had a direct interest in the proposed Tombigbee-Tennessee waterway.

General Pick. May I ask Mr. Faison if he has ever included in his studies any tonnage going to the Atomic Energy Commission?

Mr. Faison. No; I never have.

Mr. Donnelly. Mr. Faison, did you include in your studies any tonnage which would move up the proposed Tombigbee to Pickwick Pool on the Tennessee River, and then go upstream toward Chattanooga and Knoxville?

Mr. Faison. Yes.

Mr. Donnelly. You did?

Mr. Faison. Yes, sir.

Mr. FORD. I think the question ought to be asked what is the use, or the contemplated use, of that coal tonnage that was included in the amount that Mr. Faison has put in his studies.

Mr. DONNELLY. I did not understand him to say that. The engineers spoke of a number of commodities, and for the benefit of the committee we will take up each of the commodities one by one when we get along that far.

COMMODITIES WHICH MIGHT MOVE ON TOMBIGBEE

Now, I was surprised to find a statement on page 3, paragraph 5, at the top of the Corps of Engineers' answer to the investigative staff's report to this committee, and it is the second page 3 of the mimeographed document. It is not the first—there are two pages 3 in there—it is the bottom of page 3.

Mr. MCGRATH. Yes; I have it.

Mr. DONNELLY. Let me read from that, if I may:

> In its summary, the investigative staff cuts the benefit-cost ratio from above unity to 0.27 to 1. When further examination discloses that the report rejects the probability of any substantial diversion of rail or Mississippi River traffic originating or destined beyond the mouth of the Tennessee River at Paducah.

Gentlemen, the mouth of the Tennessee River at Paducah is away up here [indicating] at the top of the map.

General PICK. Are you reading from paragraph 6?

Mr. DONNELLY. Paragraph 5. Let me read that again since that is important:

> When further examination discloses that the report rejects the probability of any substantial diversion of rail or Mississippi River traffic originating or destined beyond the mouth of the Tennessee River at Paducah, the reason for the abrupt drop becomes apparent. Further references to unbalanced haul and to delays in passing also indicate that the investigative staff has failed to grasp one of the principal intended functions of the connected waterway. It is to provide a short, north-bound, slack-water route to points on the Ohio, Illinois, and upper Mississippi Rivers for through standard-type water-carrier equipment which would take advantage of the Mississippi River current to expedite the south-bound return voyage. Practically all of the advantages claimed by the investigative staff for the Mississippi route would be available to the users of the proposed improvement. On the other hand few of the disadvantages of the upstream movement against the current of the open channel would prevail on the slack-water route.

Now, the staff of this committee did not do what is charged here.

The staff of this committee used as a basis of its computations precisely the same data that the Corps of Engineers used so there would not be any conflict. I have here a document which has been taken from the files of the Corps of Engineers at the period about which we are speaking, and both the engineers and the staff followed this formula. There is no difference. It reads as follows:

> Mississippi River traffic was analyzed for a period of 10 years to arrive at an estimate of tonnage which would have been potentially divertible to the Tombigbee-Tennessee waterway had it been in existence. That part of Mississippi River traffic originating at Baton Rouge or at points south and east of Baton Rouge—

New Orleans is south and east of Baton Rouge—

> or at points west of Morgan City—

here is Morgan City here, directly south of Baton Rouge—

> and terminating either at Cairo—

up here at the confluence of the Mississippi and the Ohio Rivers—

or Mississippi River points north of Cairo or at Paducah or Ohio River points north of Paducah was considered potentially divertible to the proposed new route.

That is precisely what the staff of this committee has done. We have followed their formula.

Mileage From New Orleans to Upstream Ports

Now, if you gentlemen will turn in that 1945 House document which each of you have, to page 148 you will see table 20, and you will note from the footnotes in table 20 that the formula there in the footnote is the same formula that I have read, and the formula used by the staff of this committee was precisely the same formula as used by the Corps of Engineers. So, we are not talking about apples and oranges; we are talking about the same points of origin and the same points of destination. And I am sure that you recall the figures estimated by the engineers of $2.02 to go from New Orleans back upstream to Cairo by the Mississippi, and $1.32 to go from New Orleans across Mississippi Sound, and then up the Tombigee and the proposed waterway and the Tennessee up to the mouth of the Ohio and down to Cairo.

Now, just to show you gentlemen of the committee, if I may, that the engineers may be comparing apples with oranges when it will help them to increase the savings, so that they can ask Congress to appropriate money for this project, let me invite your attention to another table which we find. Now, the table submitted by the Corps of Engineers appears on page 201 of the document before you, and is entitled, "Tennessee-Tombigbee Waterway, Waterway Distance to Gulf Ports," and on page 200 of this document from which we are reading, which is the 1946 hearings of the Committee on Rivers and Harbors, we find at the bottom:

Colonel Feringa. All right, sir; I think there is such a table in the report. We will make a table and insert it in the record at this point.

(The table is as follows:)

Tennessee-Tombigbee Waterway

Waterway distances to Gulf ports

From—	To Gulf at New Orleans, via Mississippi River	To Gulf at Mobile, via Tennessee-Tombigbee	Savings	
			Miles	Percent
	Miles	*Miles*		
Minneapolis-St. Paul	1,722	1,596	126	7.3
Chicago	1,413	1,287	126	8.9
St. Louis	1,049	923	126	12.0
Cairo	869	743	126	14.5
Pittsburgh	1,850	1,630	220	11.9
Cincinnati	1,380	1,160	220	15.9
Louisville	1,247	1,027	220	17.6
Paducah	916	696	220	24.0
Chattanooga	1,380	730	650	47.1
Junction of Tennessee River and Tombigbee Canal	1,131	481	650	57.5

This is the Corps of Engineers' table. You gentlemen will note the savings as shown in miles.

We have Minneapolis-St. Paul, if you go via the proposed waterway you save 126 miles. That is not so, you lose 48 miles. To Chicago a saving of 126 miles. That is not so; you lose 48 miles. A saving to St. Louis of 126 miles. That is not so. You lose 48 miles. To Cairo, a saving of 126 miles. That is not so. The actual figures are a loss of 48 miles, and on down the table. I have here figures which I can pass to you, and you can compare them. They are in exactly the same order in which they appear in that table.

Mr. RABAUT. From where do these figures come?

Mr. DONNELLY. Those figures come from data of the Corps of Engineers which are reflected in the mileage chart contained in the big map on the easel. I think the members of the committee will find in a document before them a map in a separate exhibit which appears at page 172 of your document. On that page 172 you find mileage on a chart entitled "Plate Data."

(The chart is herewith inserted.)

Now, I understand the heading on the engineers' table is from the one port, New Orleans, to these points, but for the other it is from Mobile to these points, so the engineers are using apples and oranges.

The engineers have eliminated from their computations the mileage from New Orleans to Mobile, which you can see from their own figures is a total of 156 miles. So, it just shows that you can prove anything with figures, and we submit this chart on the estimated mileage at this point for the record.

Mr. RABAUT. Without objection it may be included.

(The matter referred to is as follows:)

Distance on the proposed Tombigbee waterway upstream movement compared with the Mississippi River upstream route now in use

From New Orleans to—	Upstream Mississippi River route	Upstream Tombigbee route	Gain (+) or loss (−)	From New Orleans to—	Upstream Mississippi River route	Upstream Tombigbee route	Gain (+) or loss (−)
Upper Mississippi River ports:				Ohio River ports—Continued			
Minneapolis-St. Paul	1,718	1,766	−48	Paducah	906	862	+44
Chicago	1,398	1,446	−48	Upper Tennessee River ports:			
St. Louis	1,043	1,091	−48	Chattanooga	1,370	896	+474
Cairo	860	908	−48	Wilson Dam	1,165	691	+474
Hickman	824	944	−120	Junction of the Tennessee River and Tombigbee Canal	1,121	647	+474
Ohio River ports:							
Pittsburgh	1,841	1,797	+44				
Cincinnati	1,379	1,335	+44				
Louisville	1,236	1,192	+44				

Mr. RABAUT. Now, I think we had better resume this afternoon at 2 o'clock.

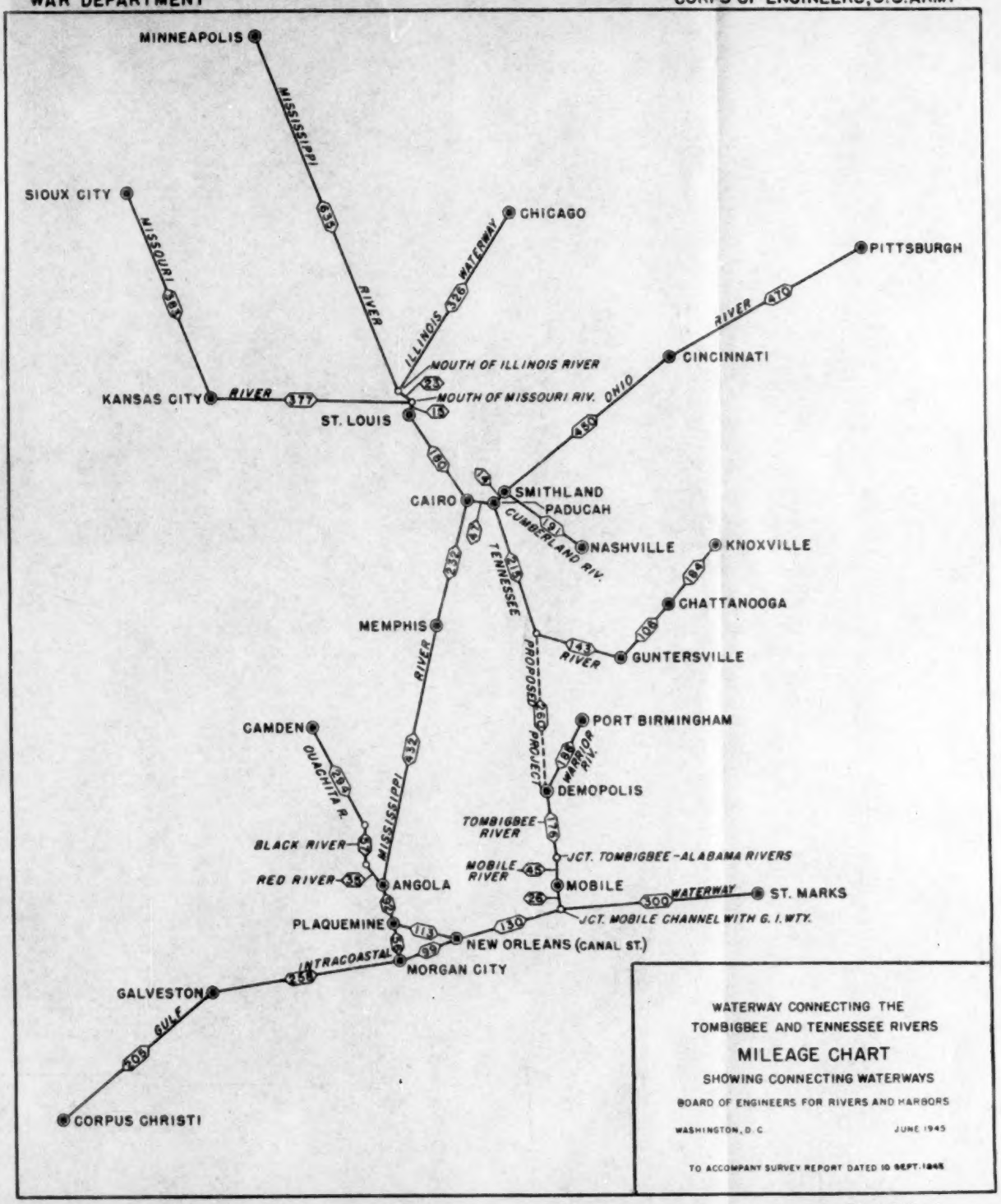
Mr. FORD. Mr. Chairman, I think at this point, or early this afternoon that representatives of the Corps of Engineers should have an opportunity to explain the alleged discrepancy.

Mr. RABAUT. Oh, yes; but we cannot go into that now, can we? We will do it at 2 o'clock because we have a call to the House now.

Mr. KERR. We will meet at 2 o'clock.

WAR DEPARTMENT

CORPS OF ENGINEERS, U.S. ARMY



WATERWAY CONNECTING THE
TOMBIGBEE AND TENNESSEE RIVERS

MILEAGE CHART

SHOWING CONNECTING WATERWAYS

BOARD OF ENGINEERS FOR RIVERS AND HARBORS

WASHINGTON, D. C. JUNE 1945

TO ACCOMPANY SURVEY REPORT DATED 10 SEPT. 1945

PLATE 1

86506 O - 51 (Face p. 74)

WEDNESDAY, MAY 23, 1951.

AFTERNOON SESSION

Mr. KERR. You may proceed.
Mr. DONNELLY. We are ready to proceed.

FURTHER DISCUSSION OF MILEAGES

General PICK. Before we leave the mileage table, I would like to make a statement on the statement that was made prior to the recess for lunch.

Mr. Chairman, I am looking at page 201 of the hearings before the Committee on Rivers and Harbors, House of Representatives, Seventy-ninth Congress, second session, on the improvement of waterways connecting the Tombigbee and the Tennessee Rivers, Ala. and Miss., dated May 1 and 2, 1946.

A table was asked for in those hearings when Colonel Feringa, who was at that time on duty in the Office of the Chief of Engineers, was testifying on the report, and Mr. Rankin, a Member of Congress, asked this question:

> Do you have a table worked out similar to that which you had last year? I would like to have you put one in here showing the mileage, the distance between ports, going either way.
>
> Colonel FERINGA. All right, sir. I think there is such a table in the report. We will make a table and insert it in the record at this point.

The table is labeled "Tennessee-Tombigbee waterway, water distances to Gulf ports."

If you have before you there the document opened at page 201, you will see that the distance set up there from New Orleans to Minneapolis-St. Paul is 1,722 miles. In the second column, which is headed "To Gulf at Mobile via Tennessee-Tombigbee," there is a distance figure of about 1,596 miles to Minneapolis-St. Paul. The difference between the distance from Mobile via the Tennessee-Tombigbee waterway to Minneapolis and St. Paul, between that distance and the distance from New Orleans to Minneapolis and St. Paul, is that it is 126 miles shorter from the port of Mobile.

Mr. DONNELLY. Do you mean 156, General—130 plus 26?

General PICK. I am reading from the document here, and it says "126".

Now then, the same distances are given in the two columns to Chicago, St. Louis, Cairo, Pittsburgh, Cincinnati, Louisville, Paducah, Chattanooga, and then, junction of Tennessee River and Tombigbee canal.

That was set up to show the differences between the two ports to points of destination on the inland waterway system, and that is all we claim it to be, sir. That is all.

Mr. DONNELLY. We understand from the heading of the table, General, appearing on page 201 of the 1946 hearings before the Committee on Rivers and Harbors, that the distances are between the upstream ports in the one column, to New Orleans, and the distance from the upstream ports to Mobile, in the second column; but the committee is interested in knowing what distances must be traversed by the barges which are to come back upstream via the proposed Tombigbee waterway to the upstream ports of Cairo, Minneapolis, instead of going back up the Mississippi.

The whole purpose of the proposed waterway is explained in your various documents, to provide an alternate waterway to go back up on the Tombigbee instead of upstream on the Mississippi.

General PICK. The counsel has made the statement for the record which says that these statements in this table in the document which I have just quoted from were incorrect. I maintain they are correct.

Mr. DONNELLY. And I say in turn they do not show the distances from New Orleans, which is the ultimate port of destination, back to the points such as Cairo and Minneapolis via the proposed waterway as laid before the committee by the Corps of Engineers.

REQUESTS FOR CONSTRUCTION FUNDS AND NEED OF DEFINITE PROJECT REPORT

To return to the subject that we discussed this morning, we had before us at that time the appropriation's history of the Tombigbee waterway, and we saw in the fiscal year 1949 the engineers had requested the Bureau of the Budget for $5,735,000, construction and planning, and again in 1951 they asked the Bureau of the Budget for $2,500,000 for construction.

General Pick, this morning and on yesterday you stated that the definite project report on the proposed Tombigbee waterway had not been completed. Mr. Slichter explained this morning there was a difference, and perhaps the committee does not understand the difference, between a definite project report and definite project studies. The term "definite project studies", he explained, is the operation pursued by the Corps of Engineers in planning, to compile the data necessary for the definite project report. He sought to explain these requests for construction money in the fiscal year 1949 and the fiscal year 1951 as based upon definite project studies.

General Pick explained to the committee that that is part of their normal regular procedure.

I would like to take that up at this point.

I have before me a manual of the Corps of Engineers entitled, "Civil Works Administration, Initiation of Projects." Down below on the cover page there appears, "The Engineer School, Engineer Center, Fort Belvoir, Va." I would like to read from pages 7 and 8.

General PICK. I object to that. The engineering school has nothing to do with this hearing, and I have no idea where that document came from, or who wrote it. If the counsel will take a copy of our orders and regulations and quote from them, I will not object.

Mr. DONNELLY. I will also quote from the orders and regulations, and I will also quote from your report to this committee on April 16, 1951. Let us take it up in steps.

General PICK. Who prepared that document, please?

Mr. DONNELLY. It is shown here as the "Engineer School, Engineer Center, Fort Belvoir, Va."

On the second page there is the following:

> This text was prepared at the Engineer School, Fort Belvoir, Va., during 1946–48. It was reviewed and revised by the Office of the Assistant Chief of Engineers for Civil Works in December, 1949.

Now, the Assistant Chief of Engineers for Civil Works is under your command, is he not, General Pick?

General PICK. He is.

Mr. DONNELLY. I will now read from pages 7 and 8 of this manual:

Detailed planning and design: The steps involved in this phase of project development involve many considerations, including the over-all planning and establishment of construction programs on both an annual and a long-range basis. More detailed discussion of this phase is covered in another program of this course. The purpose at this time is to outline the principal steps with respect to an individual project.

Request for construction funds:——

And that involves this committee.

The first step after authorization of the project and determining its place in the construction program is to obtain funds with which to carry out the construction. This usually takes place in two or more stages. First, a request for detailed planning funds with which to prepare definite project reports, plans, and specifications, etc., and second, request for the funds required for actual construction. In some cases, however, the initial request may cover both the planning fund and funds for initiation of construction. In either case the procedure is the same. The Chief of Engineers, on the basis of information from the division and district engineers, prepare data sheets to support a request for inclusion of funds for a specific project in the budget for the coming fiscal year. These proposed budget items are first presented to and discussed with the Bureau of the Budget in order that they may be correlated with budget requests from other departments of the Government into a consolidated budget consistent with the over-all program of the President. When the budget request of the President is made available to Congress shortly after the beginning of each calendar year, a subcommittee—

this subcommittee—

of the Committee on Appropriations of the House of Representatives takes the initial action in Congress on the President's budget proposals. The subcommittee holds hearings and asks for information from the Chief of Engineers and local interests concerned with the projects and prepares its recommendations to the full Committee on Appropriations which, in turn, presents a proposed appropriation bill for consideration by the House of Representatives. After action by the House, or simultaneously with consideration in the House, similar action is taken in the Senate. After passing of the appropriation bill by the House and Senate, and signature by the President, the money required for the project is made available to the Chief of Engineers (see O. and R. 4212.01 to 4212.09 and 4213.01 to 4213.14).

Preparation of definite project report: The Chief of Engineers assigns to the appropriate division and district engineer the responsibility for preparing a definite project which serves as a basis for programing the planning and construction of the project to establish definitely the most suitable plans for accomplishment of the project and provides a definite basis for final detailed plans and specifications. (See O. and R. 4214.01 to 4214.34.) This important step in the detailed planning of a project is taken in order to close the gap between the preliminary engineering design completed during the survey stage and the final engineering design necessary to initiate construction of the project. Due to the interval of time between surveys on a project and actual construction and the necessity for limiting expenditures during survey stage to the minimum necessary to furnish a conclusive answer on the general nature and justifiability of a project, the preparation of a definite project plan has been found to be an efficient procedure. Upon receipt and approval by the Chief of Engineers of the definite project plan, the Chief of Engineers assigns responsibility to the division and district engineers for preparation of the final plans and specifications.

Are the young engineering officers being told there about any such concept as definite project studies which take the project up piecemeal as a basis for requests for funds to the Congress?

General PICK. The procedure which you have outlined there, sir, is in general exactly what we have done and it is the procedure which was used at that time. Those young officers down there are given a very short course in civil works, and it was not necessary to go into great detail because it would be too much for them—they do not have

enough time in the course to do that, so it was more or less generalized.

In 1949, on the 12th of August, I had prepared and submitted to our field organization a letter which was putting into effect our definite procedures in this work, which, Mr. Chairman, I would like to read into the record at this time.

(The letter was read by General Pick, as follows:)

DEPARTMENT OF THE ARMY,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, D. C., August 12, 1949.

Subject: Definite project reports—Civil works.
To: Division engineers, except division engineers WOD.
District engineers, except district engineers of districts in WOD.

1. The modifications to existing project planning procedures as outlined in the following paragraphs are presented with the view toward reducing engineering planning costs, maintaining uniformity in engineering work loads, and enabling further delegation of authority to division engineers for approval of final plans and specifications. In the application of these procedures it is suggested that district engineers establish and maintain up-to-date, tentative planning and construction schedules for those projects where construction may be initiated within the next 6 years.

2. For projects of a major scope it is desirable in many cases to begin construction on initial phases before completion of detailed plans for the later phases. In order to facilitate this procedure and to expedite preparations for initial construction, it is desired that consideration be given to submittal of the definite project report in sections, each section covering a phase of the work. Provisions of paragraph 4214.02b, orders and regulations, are hereby modified to permit preparation of definite project reports by sections.

3. The amount of investigations and design analyses necessary for each section will depend upon the extent of the investigations made for the survey report, on local conditions, and on the type of project under consideration. Each section will be a continuation and extension of the survey report investigations and will conclude with definite recommendations (excepting the general section) for that phase of the work with which it deals.

4. Sections of the definite project report will be completed and submitted in an order that will assure continuity between the planning and construction of the project. The order of submission and the extent of treatment in each part will be determined by the division and district engineers. For example, in the case of a hypothetical multiple-purpose project, sections might be submitted in the following sequence in advance of each phase of the work.

(*a*) General: This section will furnish the reviewer with a general description of the engineering features and conditions associated with the project. It will serve to coordinate the various sections of the report, and will include a brief general treatment of such items outlined in paragraphs 4214.12 to 4214.30, inclusive, of orders and regulations, as are applicable, including estimates of cost. As this section is to contain only information, it will not include recommendations or require approval.

(*b*) Hydrology (including criteria for reservoir, spillway and outlet capacities, for flowage requirements, and plan of reservoir regulation).

(*c*) Geology, field investigations and topography.

(*d*) Site selection (if not adequately fixed by survey report).

(*e*) Capacity of hydro-power installation.

(*f*) Land acquisition (to include information currently required in real estate planning report and to replace that report, and to be submitted in first and second parts when necessary to expedite construction progress. It will not duplicate information included elsewhere in the definite project report).

(*g*) Reservoir clearing.

(*h*) Access roads and administrative facilities.

(*i*) Sources of construction materials.

(*j*) Relocations.

(*k*) Stream diversion and outlet works.

(*l*) Navigation locks.

(*m*) Dam.

(*n*) Spillway.

(*o*) Powerhouse.

(*p*) Reservoir management (including recreation, fish and wildlife, malaria control).

5. Each section of the definite project report will establish the basis of design and will include all applicable studies now required by paragraphs 4214.33 and 4215.11, orders and regulations. Upon approval, the design of details and the preparation of contract drawings and specifications for the phase of the work covered in the section may proceed provided that funds for that purpose have been allotted.

6. Upon review of a section of the definite project report by the Chief of Engineers the action on that section of the report in the Office of the Chief of Engineers will indicate whether the designs are considered adequate and in conformance with departmental standards, and whether the authority for approval of plans and specifications for that phase of the work is to be delegated to the division engineer. If such authority is granted, the conditions established by paragraph 4215.04, orders and regulations, may be disregarded, provided no consequential changes in design are made during preparation of the final plans. It is anticipated that the success of this procedure will depend on the extent to which engineers in the Office of the Chief of Engineers are used in a consulting capacity during preparation prior to submittal of a section of the definite project report.

7. Paragraph 4214.09, orders and regulations, is modified to require the submission of 10 copies of definite project reports, or sections thereof, for the use of the Chief of Engineers. Submittal of copies of correspondence in quadruplicate, copies of the report for the Federal Power Commission and to the Waterways Experiment Station, as required by paragraph 4214.09, orders and regulations, is not modified.

8. Submittal of some sections of the definite project report following initiation of construction should reduce the amount of planning funds required prior to the allotment of construction funds. Planning programs, including those for projects where definite project reports are now in preparation, will be reviewed to determine whether submittal of definite project reports in sections will be of advantage and whether an adjustment in planning funds is possible.

9. Orders and regulations will be modified in accordance with the above by publication of a change thereto in the near future.

By order of the Chief of Engineers:

CRAIG SMYSER,
Lieutenant Colonel, Corps of Engineers, Executive.

Mr. DONNELLY. You have read the document, of which I have a copy in front of me, and you will note in paragraph 4 the language—

> Sections of the definite project report will be completed and submitted * * *.

I note in paragraph 6:

> Upon review of a section of the definite project report by the Chief of Engineers * * *—

and we note in paragraph 8—

> submittal of some sections of the definite project report following initiation of construction * * *.

This morning your assistant here, Mr. Slichter, sought to convey to this committee a new concept, something which he styled "a definite project study," which I do not find in any of your orders and regulations; which I do not find in this letter that you have just read, and which I do not find in the manual for the school of engineers at Fort Belvoir.

Now, in the fiscal year 1949, and again in the fiscal year 1951, the Corps of Engineers asked for substantial money to initiate the construction of this proposed Tombigbee-Tennessee waterway, and the explanation given this morning by Mr. Slichter was that at that time you had definite project studies for the Gainesville lock and dam which is the first lock involved in the operation.

Now, I want to ask you the question, if I may, Do you have a definite project report for the Gainesville lock section of the proposed Tennessee-Tombigbee waterway?

General PICK. Mr. Slichter, will you answer that question?

Mr. SLICHTER. As I pointed out this morning, the meeting that I referred to as of December 8, 1947, constituted the definite project action on the Gainesville lock. We have passed on that point. We now have plans and specifications, by your own record, 97 percent complete as of last summer. The studies have been completed.

Mr. DONNELLY. We are back in the same old terminology. You are talking about something else. The question to the gentleman is, When was the definite project report for the Gainesville lock section of the proposed Tennessee-Tombigbee waterway completed by the Corps of Engineers?

Mr. SLICHTER. I was trying to point out to you that the definite project report, as such, is a compilation of definite project studies; the definite project report transmittal is a formality; that the studies are the design analysis and the data on which the project is based; that those studies were approved at this meeting of December 8.

Mr. DONNELLY. Now, that meeting that you speak of was in the Nashville district. General Pick here yesterday sought to distinguish between action by himself as Chief of the Corps of Engineers and the action there that you speak of in the Nashville district.

Now, will you please answer the question for the committee, When, if ever, was the definite project report completed for the Gainesville lock section of the proposed Tennessee-Tombigbee waterway?

Mr. SLICHTER. The meeting to which I referred was held in the office of the Chief of Engineers on December 8, 1947, attended by representatives of the Chief of Engineers, the division engineer, and the district engineer.

Mr. DONNELLY. In what city?

Mr. SLICHTER. Washington, D. C.

Following that meeting, and from the findings of the meeting, the designs were approved by endorsement of the Office of the Chief of Engineers on the district engineer's letter, in which he submits a considerable volume of design figures. The point that I am making is, it does not take a formal report; it takes action by the three offices to formalize this.

Mr. DONNELLY. The concept "Definite project report" has been used repeatedly and consistently by the Chief of Engineers in all of his orders and regulations, in the letter that he just read, in the manual to the Engineer School officers at Fort Belvoir. That is the document, the "definite project report," that the Chief of Engineers had stated to this committee, in writing on April 16, 1951, was completed prior to the request for appropriation of the initial construction funds.

Now, will you answer the question directly, What is the date of the approval by the Chief of Engineers of the definite project report for the Gainesville lock of the proposed Tennessee-Tombigbee waterway?

Mr. SLICHTER. The date of the letter approving the design for the Gainesville lock, and you can call it the definite project report; you can call it the definite project studies—it is one and the same thing—and it is dated December 19, 1947, the second endorsement by the Office of the Chief of Engineers, signed by Richard L. Jewett, Lieu-

tenant Colonel, Corps of Engineers, Deputy Chief of Civil Works for Rivers and Harbors.

Mr. DONNELLY. Now, we are back again to the old confusion of terms.

This morning you told me that a definite project study was different from a definite project report. Now you say the two are the same.

When, if ever, was the definite project report for the Gainesville lock, the first section of the proposed Tennessee-Tombigbee waterway, submitted to the Congress or to this committee?

General PICK. It never has been submitted to the Congress, Mr. Donnelly, and the Congress has never asked for one of our definite project reports, to my knowledge.

Now then, the orders and regulations that you have been quoting from, and the textbook they use at the engineering school, point out definitely that in order to get a project study, and develop a project report, it requires a tremendous amount of information to be obtained, gathered, studied, and digested before plans and specifications can be prepared.

Your investigating committee, Mr. Chairman, has found out that the plans and specifications for that lock, the lower lock on the Tombigbee, are now 97 percent complete.

Now, that is a definite indication that the project study and the definite project report studies have been approved, and we have gone ahead and prepared the actual design for the building of the structure, so it seems to me that the point that is being belabored here is one of confusion. I see no point to it. I would like to be able to answer a question which I think is being asked in good faith, but I do not know whether there is an answer to a question, as is framed, when all we can do is to give the actual steps which have been taken in order to arrive at the design of this structure.

Mr. DONNELLY. All right, General. Now, with respect to the Gainesville lock, this definite project report, as we now understand from Mr. Slichter, it was, did it include an accurate cost estimate of the total construction of the Gainesville lock?

Mr. SLICHTER. This document make no reference to the estimate.

Mr. DONNELLY. That is exactly the point. So, Congress is not given a sound cost estimate.

(NOTE.—The uncertainty of cost, and of location of the Gainesville lock, is indicated by the following excerpt from the document approved by the Chief of Engineers on December 19, 1947:)

Initial channel, minimum bottom width 170 feet

Site B:	
Rectification of river channel and excavation for lock approaches, 1,824,000 cubic yards at 20 cents	$364,800
Lock excavation, 804,000 cubic yards at 75 cents	603,000
Lock cofferdam	275,000
Total	1,242,800
Site C:	
Cut-off channel and lock approaches, 1,920,000 cubic yards at 25 cents	480,000
Lock excavation, 999,000 cubic yards at 60 cents	599,400
Lock cofferdam (includes cofferdike and pumping only)	75,000
Bridge over lock, Highway No. 39	220,000
Total	1,374,400

Initial channel, minimum bottom width 170 feet—Continued

Difference in construction costs	$131,000
Saving by reduction of distance	900,000
Total saving, site C over site B	768,400

Ultimate channel, minimum bottom width 300 feet

Site B:	
Rectification of river channel and excavation for lock approaches, 7,113,000 cubic yards at $1	$7,113,000
Lock excavation, 804,000 cubic yards at 75 cents	603,000
Lock cofferdam	275,000
Bridge over Tombigbee River, Highway No. 39	500,000
Total	8,491,000
Site C:	
Cut-off channel and lock approaches, 2,907,000 cubic yards at 25 cents	726,750
Lock excavation, 999,000 cubic yards at 60 cents	599,400
Bridge over lock, Highway No. 39	220,000
Lock cofferdam (includes cofferdike and pumping only)	75,000
Total	1,621,150
Difference in cost	6,869,850
Saving by reduction of distance	900,000
Total savings, site C over site B	7,769,850

General PICK. Now, the estimate of the cost of the construction of the lock is available. I do not know whether it has been given to the committee or not.

Mr. DONNELLY. Was it given to Congress in the fiscal year 1949 when the engineers asked the Bureau of the Budget for $5,735,000 for construction and planning and the Bureau of the Budget estimated to Congress $1,500,000 for construction?

General PICK. The Congress was given the total estimated cost of this entire project in 1949 as being $136,244,000.

Mr. DONNELLY. You have told us now that you take up your definite project reports in steps, or in sections, by your own words in this letter that you read of August 12, 1949—"Sections of the definite project report."

The $136,000,000 figure that you refer to now, which you say was submitted to Congress in 1949, was not based on a definite project report for the entire proposed project; was it?

General PICK. No. That was not based on a definite project report.

Mr. DONNELLY. Will you answer this question: Did the corps tell Congress in the fiscal year 1949, when you asked for the construction money, how much your sectional definite project report estimated the total construction of the Gainesville lock to be?

General PICK. I cannot answer that.

Colonel POTTER. May I answer that question?

As the committee well recognizes, this [indicating] is one of the sheets that I used in my testimony, and which was handled by Mr. Cohen, on my left, during the testimony, and as an adjunct to the justification sheets which were my main volume, and the committee will remember that I frequently referred to these during my testi-

mony. This [indicating] is the data sheet on the request for funds for 1950.

Mr. DONNELLY. Will you identify it for us, please?

Colonel POTTER. "Appropriations, Subcommittee." At that time $2,000,000 was put in as proposed operations, broken down as follows:

Planning, phases 1 and 2, $300,000.

Land acquisition, $50,000.

Commence construction by continuing contract on Gainesville lock, $1,650,000.

On a table to the right, completion of construction of Gainesville lock and dam, $6,134,000.

I am asking for the justification sheet that was used for this presentation to be made available, and I will be able, I believe, to show the committee that the data were indicated in that sheet.

Mr. DONNELLY. We are getting your testimony, sir. Will you identify it? Was it before this subcommittee? Will you identify the date?

Colonel POTTER. It is the 1950 appropriation, original estimate of $2,500,000. An appropriation apparently of $200,000; the budget, $200,000.

Mr. KERR. Did you say you wanted to put that in the record, Colonel?

Mr. DONNELLY. No, Judge, he was reading something at the time; he wanted to indicate what his testimony to the committee was.

Colonel POTTER. The justification sheets are made available and a copy is presented to every member of this committee while the testimony is being taken down.

Mr. DONNELLY. The point I wanted to clear up here for the benefit of the committee is the procedure of the Corps of Engineers who are asking the Congress for construction money. They have what they call a definite project report, which the Corps of Engineers through their own order, say is available before they ask for the initial construction money, and we want to find out what the Corps of Engineers identifies as the definite project report or as a section of the definite project report, and whether Colonel Potter in his testimony on the 1950 appropriation bill was identifying, using the concept used by Mr. Slichter, a definite project report, and nothing more. And it was testified this morning both by General Pick and Mr. Slichter that the new concept is in the definite project study.

Mr. SLICHTER. Could I explain that?

Mr. DONNELLY. Yes.

Mr. SLICHTER. I tried to point out that there is a definite project report, a book full of definite project studies. I would like to express it this way: Take a structure, or a dam, we have to make investigations; we have to make analyses and tests, explorations and studies to determine, for instance, the slope of the embankment. That is a definite project study. That goes on here.

Then, take the spillway, the hydraulic studies, things that have to be determined, and that is a definite project study, and it goes in the book.

And when you get through with all of the studies of the structure, all of the inquiries, and all of these things have been studied, you arrive at an integrated and final project report; all of them are put

together in the report, called the definite project report. They are one and the same thing. We are not talking about two different things.

Mr. DONNELLY. This morning, Mr. Slichter, you sought to tell the committee that there was some difference between the two, and I am asking you with regard to the testimony of yesterday.

Mr. SLICHTER. Well, I regret that I gave that impression.

Mr. DONNELLY. Here is the question before the committee: The question was asked yesterday, and this is the basis of this present situation:

> Mr. DONNELLY. When was the definite project report completed on the Gainesville lock and dam?
> Mr. SLICHTER. Approximately 3 years ago.

Now, the pending question to Colonel Potter is whether in his testimony before this subcommittee, in the hearings he referred to on the appropriation bill for 1950, was it?

Colonel POTTER. 1951.

Mr. DONNELLY. 1951. Whether he told the committee that a definite project report for the Gainesville lock used on this proposed waterway had been completed, and whether he told the committee the accurate estimated cost for the Gainesville lock? That is the pending question.

General PICK. Mr. Chairman, the counsel seems to be laboring under the apprehension that the Corps of Engineers has failed to supply the committee with certain documents. I would like to ask the chairman of the committee this question: As to whether or not the subcommittee on appropriations has ever asked the Corps of Engineers, in requesting information, that the definite project report be furnished?

Mr. KERR. It has not been done while I have been on the committee in the last 5 or 6 years.

Mr. DONNELLY. Now in line with the general's statement, the question before this subcommittee now is not whether or not the definite project report is submitted by the Chief of Engineers. The question is whether the Corps of Engineers, prior to the time of the testimony in the hearings completes a definite project report which will contain accurate cost estimates upon which this committee can then decide whether to vote funds for initial construction. That is the point before the committee.

General PICK. We always testify as to what the project will cost when we come before the appropriations committee asking for funds.

Mr. DONNELLY. Now on this Tennessee-Tombigbee situation Colonel Potter said he testified to $136,000,000 for the entire project.

Then I asked him when he was testifying with reference to the Gainesville lock, whether he said he had a complete definite project report and whether he furnished the committee the accurate estimated cost of the Gainesville lock, based upon that definite project report.

General PICK. What was the data sheet; what does it show, Colonel?

Colonel POTTER. This data sheet was used in supporting request of the Bureau of the Budget and the budget did not permit that, so that information was never used in the hearing.

(The data sheet is as follows:)

Waterway Connecting Tombigbee and Tennessee Rivers, Ala. and Miss.

Tennessee-Tombigbee waterway

Total estimated cost	$179,264,000
Allotted	898,000
Budget estimate for 1952	100,000
Total	998,000
Additional to complete	178,266,000

Authority and project description

Authority	Description	Status (percent complete)
River and Harbor Act of July 24, 1946 (H. Doc. 486, 79th Cong., 2d sess.).	Channel 9 feet deep with a minimum bottom width of 170 feet in the river and canal section and 150 feet in the divide cut. Channel would be obtained by construction of 4 locks and dams in the Tombigbee River and 11 locks in the canal section, and several rectifications and cut-offs. Length of entire project, 260 miles. Mobile district to supervise construction of 4 locks and dams, rectifications, and cut-offs, etc., in river section from mouth at Demopolis to mile 180.	

Note.—Phases 1 and 2 planning about 11 percent complete.

Location

From mile 215 on the Tennessee River in extreme northeast Mississippi, this waterway route extends southerly through eastern Mississippi 154 miles and western Alabama 106 miles, a total of 260 miles, to the confluence of the Warrior and Tombigbee Rivers at Demopolis, Ala., 218 river-miles above Mobile, Ala. The length of the route in the Mobile, Ala., district is 180 miles.

Costs

Summary of document costs	$33,803,634
Latest estimate submitted to Congress (1948 annual report)	49,117,000
Present working estimate	49,117,000

Funds available

Unobligated balance, June 30, 1949	$23,600
1950 appropriation	200,000
Total funds available	223,600
Original estimate	2,500,000

Local cooperation

Construct, maintain, operate all highway bridges; construct, maintain, all highway relocations, all highway bridge alterations; make and maintain alterations as required in sewer, water supply, and drainage facilities; assume cost of operation and maintenance of utility crossings; provide and maintain, as required, suitable and adequate river and canal terminals. No action to secure compliance has been taken.

Status of project

Cost to June 30, 1949	$304,250
Available for 1950	223,750
Total appropriation	528,000

Work completed to June 30, 1949: Planning (phases 1 and 2) about 11 percent complete.

Work in progress or proposed for 1950:

Continuation of general definite project report	$95,950
Completion of definite project report on Gainesville Lock and Dam	75,000
Completion of plans and specifications on Rattlesnake Bend cut-off	2,800
Completion of plans and specifications on Gainesville Lock	50,000
Total	223,750

Project as a whole 0.6 percent complete June 30, 1949; 1.0 percent complete June 30, 1950.

Project scheduled to be placed in operation in fiscal year 1957.

Proposed operations fiscal year 1951

Planning (phases 1 and 2)	$300,000
Land acquisition	50,000
Commence construction by continuing contract on Gainesville Lock	1,650,000
Total	2,000,000

Project as a whole 5 percent complete June 30, 1951.

Commercial statistics

Since this is a new waterway route, this section is inapplicable. The prospective commerce consists of 5,764,000 tons of diversified commodities, principal of which are bauxite, asphalt, salt, phosphate rock, sulfur, alumina, lumber, gasoline, sugar, blackstrap molasses, fertilizer, and paper.

Benefits and justification

The annual tangible benefits as now estimated exceed the annual carrying charge based on current costs. Such benefits include savings to the public in shipping charges and direct savings to waterway operators by offering a slackwater route for existing up-bound Mississippi River traffic. The waterway will provide a new major transportation route of country-wide importance and will produce intangible benefits such as stimulation of new production now unwarranted because of high transportation costs and the provision in time of war of a shortened water route between the Gulf and northern inland points for the haul of strategic materials and military and naval craft. The benefit cost ratio based on current prices is 1.05.

Justification of increased cost

Not applicable.

Work remaining after 1951

Completion of planning (phases 1 and 2)	$1,875,000
Completion of land acquisition	152,000
Completion of construction of Gainesville lock and dam	6,134,000
Construction of Memphis lock and dam	10,800,000
Construction of Columbus lock and dam	9,334,000
Construction of Aberdeen lock and dam	8,079,000
Rectifications and cut-offs	8,141,000
Railroad-bridge alterations	1,977,000
Utility relocations	97,000
Total	46,589,000

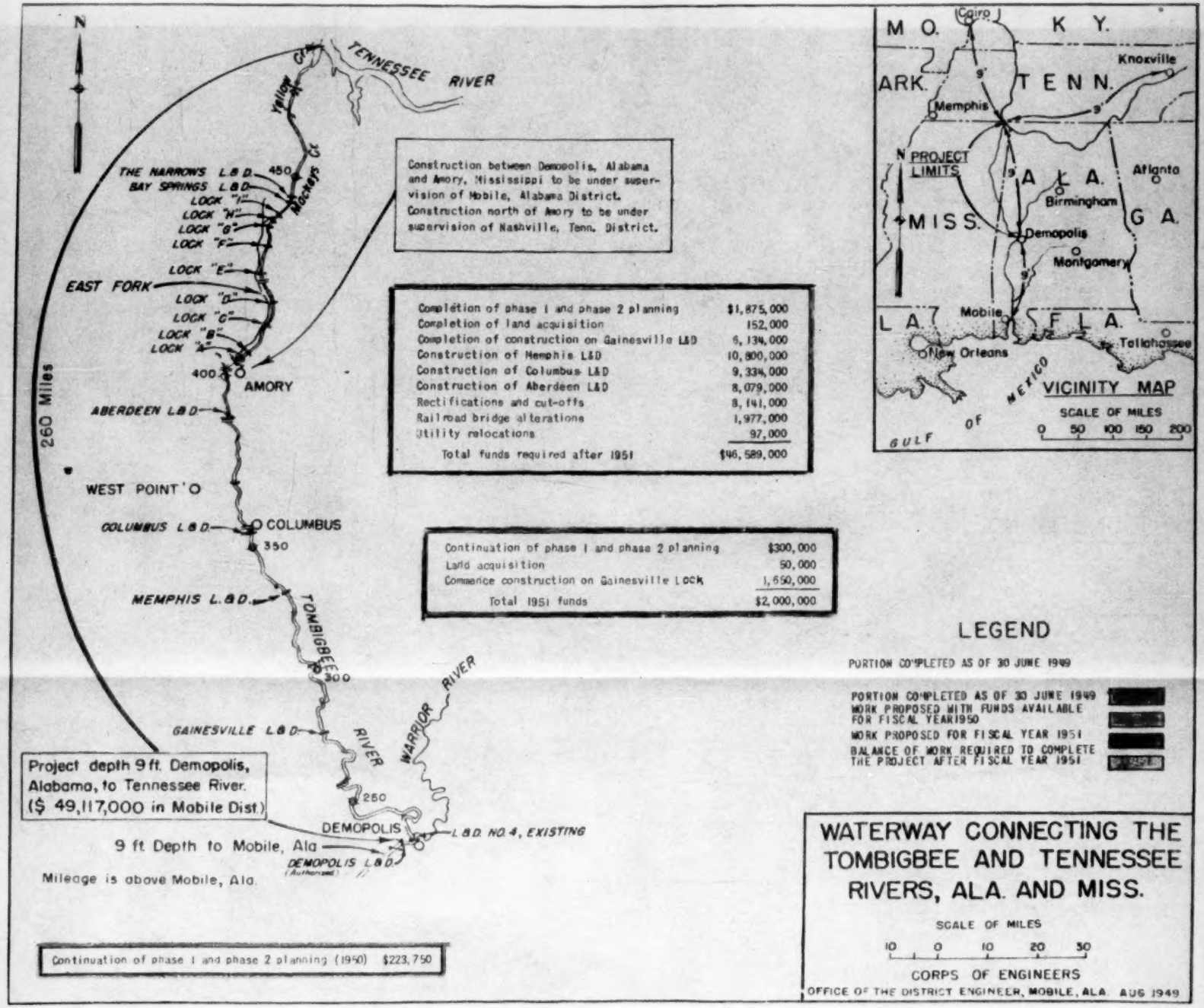
(NOTE.—The data sheet under the heading "Work in progress or proposed for 1950" contains this item: "Completion of definite project report on Gainesville lock and dam, $75,000.")

Mr. DONNELLY. What hearing; what fiscal year?

Colonel POTTER. In 1951.

Mr. DONNELLY. Fiscal 1951 the Bureau of the Budget had been asked for $500,000 planning, and $2,500,000 for construction.

Colonel POTTER. Yes.


N
TENNESSEE RIVER
Yellow Creek
Mackeys Cr
THE NARROWS L&D
BAY SPRINGS L&D
LOCK "I"
LOCK "H"
LOCK "G"
LOCK "F"
LOCK "E"
EAST FORK
LOCK "D"
LOCK "C"
LOCK "B"
LOCK "A"
450
400
AMORY
260 Miles
ABERDEEN L&D
WEST POINT
COLUMBUS L&D
COLUMBUS
350
MEMPHIS L&D
TOMBIGBEE R.
300
GAINESVILLE L&D
WARRIOR RIVER
RIVER
250
DEMOPOLIS
L&D NO 4, EXISTING
9 ft Depth to Mobile, Ala
DEMOPOLIS L&D
(Authorized)
Mileage is above Mobile, Ala.
Project depth 9 ft. Demopolis, Alabama, to Tennessee River. ($ 49,117,000 in Mobile Dist.)
Construction between Demopolis, Alabama and Amory, Mississippi to be under supervision of Mobile, Alabama District. Construction north of Amory to be under supervision of Nashville, Tenn. District.
Completion of phase I and phase 2 planning $1,875,000
Completion of land acquisition 152,000
Completion of construction on Gainesville L&D 6,134,000
Construction of Memphis L&D 10,800,000
Construction of Columbus L&D 9,334,000
Construction of Aberdeen L&D 8,079,000
Rectifications and cut-offs 8,141,000
Railroad bridge alterations 1,977,000
Utility relocations 97,000
Total funds required after 1951 $46,589,000
Continuation of phase I and phase 2 planning $300,000
Land acquisition 50,000
Commence construction on Gainesville Lock 1,650,000
Total 1951 funds $2,000,000
Continuation of phase I and phase 2 planning (1950) $223,750
Cairo
M O.
K Y.
ARK.
TENN.
Knoxville
Memphis
9'
PROJECT LIMITS
ALA.
Atlanta
Birmingham
MISS.
GA.
Demopolis
Montgomery
Mobile
LA.
FLA.
Tallahassee
New Orleans
MEXICO
GULF OF
VICINITY MAP
SCALE OF MILES
0 50 100 150 200
LEGEND
PORTION COMPLETED AS OF 30 JUNE 1949
PORTION COMPLETED AS OF 30 JUNE 1949
WORK PROPOSED WITH FUNDS AVAILABLE FOR FISCAL YEAR 1950
WORK PROPOSED FOR FISCAL YEAR 1951
BALANCE OF WORK REQUIRED TO COMPLETE THE PROJECT AFTER FISCAL YEAR 1951
WATERWAY CONNECTING THE TOMBIGBEE AND TENNESSEE RIVERS, ALA. AND MISS.
SCALE OF MILES
10 0 10 20 30
CORPS OF ENGINEERS
OFFICE OF THE DISTRICT ENGINEER, MOBILE, ALA. AUG 1949

Mr. DONNELLY. But the Bureau of the Budget deleted the construction estimate but did submit to the Congress an estimate for planning of $200,000?

Colonel POTTER. That is right.

Mr. DONNELLY. Is that your recollection from your testimony?

Colonel POTTER. No; you are talking of my predecessor. I am willing to take myself in the position——

Mr. DONNELLY (interposing). No, I am speaking of what you said in your testimony in the fiscal year 1951.

Colonel POTTER. No; I was not here—yes—I did testify on the 1951 appropriation.

Mr. DONNELLY. Now, we understand that——

Colonel POTTER (interposing). I said this data was available right then, and I said that we had it when I testified before the committee, that I had sheets like this right in front of me.

Mr. DONNELLY. In 1951?

Colonel POTTER. No.

Mr. DONNELLY. You are saying that some official came up here and that he had that?

Colonel POTTER. I know that he had that information.

Mr. DONNELLY. Who was that official?

Colonel POTTER. General Feringa. This is the standard piece of information which is available to the committee, if it wants it. It involves a considerable amount of work to do it. I can say for your information, Mr. Donnelly, and I am not trying to belabor the point either way, that I was told by the committee that I was giving too much information.

Mr. DONNELLY. By whom were you told that?

Colonel POTTER. By this committee; that I was talking too much.

Mr. DONNELLY. Would you mind passing those sheets over to me here.

Colonel POTTER. I will be glad to. As to the definite project report, never to my knowledge in my testimony either before the Senate or the House committee have I ever been asked for a definite project report. It is not a legislative piece of paper. It is a tool of the Corps of Engineers of the project to prove that we are right in coming in for an appropriation.

Mr. DONNELLY. But your definite project report contains the best figures of the total estimated construction cost of the project; do they not?

General PICK. That is right; that is given to the Bureau of the Budget when they estimate the funds, they estimate what the cost is going to be in considering our appropriation.

Mr. DONNELLY. Is that—labeled by whatever you want to call it—the estimate of the total construction cost based upon a definite project report?

Colonel POTTER. It is labeled "Total estimated cost." There is a set of justification sheets which each member of the committee has, and the basis of that estimate is the cost index, and the basis of that estimate is given to each member of the committee, and the General in testifying to the committee in his opening statement says how much the ENR index has risen since the estimate was made.

(NOTE.—The ENR index is revised and published each month in the Engineering News Record, a journal of the engineering profession generally.)

Mr. DONNELLY. Now, Colonel, I believe Mr. Slichter refers to your testimony for 1951 and said the whole list will be in the 1950 appropriation, $200,000; original estimate, $2,500,000.

Colonel POTTER. Yes.

Mr. DONNELLY. Did you have that as a basis for your testimony in fiscal 1951 or 1950?

Colonel POTTER. 1951.

Mr. DONNELLY. In 1951?

Colonel POTTER. Yes; and it shows there what we got the year before after discussing the project.

Mr. DONNELLY. I think the committee should see this document. This is the work sheet upon which the Colonel testified, upon which the engineer based his testimony.

Colonel POTTER. One of the documents.

Mr. DONNELLY. This is the one that you refer to now with respect to the definite project report. Now where in this piece of paper is reflected the fact that on this Gainesville lock, the definite project report had been completed and that the total estimated cost for the Gainesville lock had been arrived at as a result of the definite project report?

Colonel POTTER. That is a redundant piece of information; it is listed on the right-hand side of the sheet that was made up.

Mr. DONNELLY. Mr. Slichter referred to the definite project report as a formality, but it is not. It is the basis upon which the Chief of Engineers ascertains the total estimated cost of the project.

I have here before me the corps' written statement of April 16, 1951, appendix No. IV. Each member of the committee has this before him. Down at the bottom you will find in the last paragraph, paragraph 5 this statement:

> It is always desirable subsequent to authorization and reasonably shortly before construction funds are considered that a definite project report be prepared.

That is, before it is considered by this committee, it is always desirable "that a definite project report be prepared."

General PICK. What document are you quoting from? This large document?

Mr. DONNELLY. Yes.

Mr. KERR. The appendix; I have it right here.

General PICK. I have it now.

Mr. DONNELLY. Turn to the next page, Mr. Chairman and gentlemen, IV–2, paragraph 7:

> The Corps cannot undertake the construction of a project until an initial allocation of funds for actual construction is made by the Congress in a civil-functions appropriation act. Inasmuch as the data presented in the justifications and in the hearings before appropriations committees are based on the definite project report and include the cost estimates and economic analysis from the definite project report, the effect of the suggestion of the investigative staff is already being achieved through current procedure that has been in effect for several years.

Now we come back to this——

General PICK (interposing). Mr. Chairman, this document entitled "Comments of the Corps of Engineers on the Report of January 23, 1951, of the Investigative Staff of the Committee on Appropriations of the House of Representatives" is being quoted from so much that

I would like to make the request at this time that this document that I have just mentioned, and that the similar document on the Tennessee-Tombigbee waterway, be inserted in the record at this point.

Mr. KERR. Without objection, it will be inserted as requested by General Pick.

Mr. CANNON. The entire document is too voluminous. Counsel has cited the sections that apply. We could not include the document.

Mr. KERR. I was under the impression he referred to the pages containing these paragraphs.

Mr. DONNELLY. Mr. Chairman, it may be appropriate to insert at this point just 2¼ pages that we are now considering.

Mr. CANNON. Of that statement?

Mr. DONNELLY. Yes.

(These excerpts from the Corps of Engineers' formal reply to the committee on April 16, 1951, are as follows:)

APPENDIX IV

ECONOMIC ANALYSIS, REPORTS, AUTHORIZATIONS, AND APPROPRIATIONS

A. SCOPE OF REPORTS ON WHICH AUTHORIZATIONS ARE BASED

1. On pages 33, 34, 44, and 45 the investigative staff discusses the adequacy of the reports submitted by the Corps of Engineers as a basis for authorization of projects by Congress and makes recommendations numbered 11 and 12 to the effect that "Final construction authorization of civil works projects should be based upon a more advance planning report than the present survey report" and that a definite project report be prepared for all previously authorized projects before appropriation of construction funds is made for such projects.

2. These recommendations are already being followed, literally in part, and entirely insofar as the apparent intent of the staff is concerned. That part of the recommendation to the effect that authorization should be based on a "more advanced planning report" than the survey report is believed attributable to unfamiliarity with and misconception of the procedures now followed by the Corps and Congress. It would be costly and inefficient to require that the more complete and more detailed data now provided by the Corps of Engineers in its definite project reports prior to initiation of construction be submitted prior to authorization.

3. Although survey reports are not intended to fix with finality all aspects of a proposed improvement, they do determine with good accuracy the engineering feasibility, general location, and types of structures, extent of benefits, and economic justification of the improvement. They are based on field data much more complete than is indicated by the investigative staff, and the estimates are not "highly speculative."

4. It is important that the present survey report be retained as the essential step in preauthorization planning and as the vehicle for authoritative recommendation by the Department of the Army. The suggestion that the survey report serve as the basis for "preliminary approval or disapproval" will be commented on below.

5. It is always desirable subsequent to authorization and reasonably shortly before construction funds are considered, that a definite project report be prepared. This has long been the established practice of the Corps of Engineers. Its soundness is attested by the fact that the Bureau of Reclamation has in recent years inaugurated a similar procedure. The funds provided each year under the heading of "advance planning" are used in large measure for the detailed studies requisite to the definite project report. The Chief of Engineers carefully screens the projects as presented in definite project reports and in numerous instances relegates to inactive status projects which the definite project report shows to be less than fully warranted. Requests to the budget for initial funds for construction are based on the project as developed in the definite project report. The data presented to the Appropriations Committees are likewise based on the definite project report. There are a few exceptions where funds for construction are provided prior to completion of definite project studies, but such instances are usually emergencies or result from the addition of funds by the Congress itself.

6. It is the intention and desire of the entire Corps of Engineers' organization that the definite project report be as complete and reliable as possible and that all information furnished Congress, including estimates of costs and benefits, be accurate and valid. The investigative staff appears to recognize this in the statement in paragraph 3 on page 44, "The definite project report, if prepared in accordance with current instructed policy and regulations, will provide sufficient information for a decision as to whether or not a project should be constructed." Appendix II contains citation of several official corps' documents on this subject.

7. The corps cannot undertake the construction of a project until an initial allocation of funds for actual construction is made by the Congress with respect to a civil functions appropriation act. Inasmuch as the data presented in the justifications and in the hearings before Appropriations Committees are based on the definite project report and include the cost estimates and economic analysis from the definite project report, the effect of the suggestion of the investigative staff is already being achieved through current procedure that has been in effect for several years.

8. The definite project report is a planning report and for greatest usefulness must be available, at least in part, a considerable time prior to initiation of construction. But it must also be kept current, with necessary changes made from time to time, so that when a project is finally placed in the budget the data furnished to the Congress will be complete and up to date. Planning of civil works projects is a complex matter and involves a great deal of coordination with local interests, States, and other Federal agencies. This is accomplished during the definite project stage, which sometimes stretches over several years; it is in fact an important element in the "definite project planning." Rigidity in timing of definite project reports would be distinctly detrimental to orderly planning and would invite trouble and changes later on.

9. In the comments above, it has been assumed that the proposed review by Congress does not contemplate formal reconsideration by the Public Works Committee nor enactment of legislation subsequent to the authorization of projects as now handled in periodic river and harbor and flood control acts. Any such additional legislative step would be extremely cumbersome and wasteful of time and energy, including the time and energy of Congress. The delay inherent in any such procedure would defeat the purpose of last minute preconstruction consideration. Unnecessary lost motion and red tape would be inevitable with consequent inefficiency and detriment to the program of water resource development, not to mention widespread public dissatisfaction.

General PICK. Mr. Chairman, that is the only request I have asked to have this document put in the record. I think that these hearings are of such great importance that I believe these documents should be included in the hearings, and I again ask they be inserted.

Mr. CANNON. We never include documents of this size. I think we can take that up in executive session, and it is something the committee will act on later.

Mr. KERR. Yes; we will take that up in executive session.

General PICK. Yes.

Mr. DONNELLY. So that the committee will have additional information on this very important subject, I have before me a document signed by order of the Chief of Engineers; letterhead: "Armed Services, Office of the Chief of Engineers, Washington 25, D. C., October 23, 1944; circular letter No. 2,376, civil works No. 28; subject: Definite Project Report on Civil Works Project."

To "all concerned."

I will not read this document. I would like, however, to invite the committee's attention to the fact that an enclosure of this document is another document entitled "Definite Project Report" outline. The basic letter discusses the outline, and in the outline we find as No. 15 for the contents of the Definite Project Report the item "Cost estimate."

Mr. CANNON. The committee will recess until tomorrow morning. We can hold the executive session of the committee in the morning at 9:30, and the other hearings will continue at 10.

General PICK. May I make one observation?

Mr. DONNELLY. Certainly.

General PICK. Mr. Chairman, I think I should state to you as Chief of Engineers that I have a program on now that is so important, of such utmost importance to the country and national defense—I have a construction program for the Air Force and the Army amounting to about $2 billion; I have a program that is going on for the Army, the Air Force, and the Navy that has already reached proportions of a billion dollars.

I have other funds connected with national military establishments reaching into almost another billion dollars. In other words, I have about a $4 billion program under way.

I have projects circling the globe, some of them vitally important, that I am waiting to get on now to get under way, because if we do not get them under way we cannot finish them in the time to meet the military requirements.

I would like to know, because I have a lot of my key people up here and my responsibilities are suffering, and I would like to have some indication as to how long these hearings could go on, so that I could try to make some kind of arrangement to see how we can carry on the work.

Mr. CANNON. General Pick, we much appreciate your difficulty and your presence here and the assistance that you have rendered the committee, and we will have some information, some idea, when we meet tomorrow morning, as to how long the hearings will last.

General PICK. Thank you, Mr. Chairman.

Mr. KERR. I suggest we meet at 10 o'clock.

Mr. CANNON. Yes; 9:30 for the executive session and right after that for the regular hearing.

Mr. KERR. I think it would be better for 10.

Mr. CANNON. Ten o'clock for the executive session, and at 10:30 we will resume the hearings.

General PICK. Mr. Chairman, I would like to add that we are very much interested in giving the committee all the information that you want, and we want to give you the information that you need. In considering these projects, we have no purpose of trying to mislead the committee or to give the committee information that is not accurate. I think that a lot of these questions that have been brought up here confuse the committee on how we handle a construction job. The way we handle a construction job is like the industry handles a construction job.

Now, the question of economic benefits for a project is a question that gets two studies—the studies made by our people, the people who make the studies, and we discuss the study, and the people who make these studies discuss them—then the committee is given the information from both sides of the picture, and is in position to see who is right and who is wrong, or make a decision as to whatever action the committee would like to take in connection with a definite project.

We have been studying not only 1, but 182, that I understand you are going to take up.

Mr. CANNON. General Pick, the committee is fully aware and deeply appreciative of your cooperation and consideration and your understanding, of course, that we desire to get only accurate information which we need on very troublesome projects?

General PICK. Yes.

Mr. CANNON. We are very grateful to you, and we will try to arrange the future hearings so as to inconvenience you as little as possible.

General PICK. Thank you.

Mr. DONNELLY. Mr. Chairman, before we adjourn, may these documents be made a part of the record, at the proper place in Colonel Potter's statement?

Mr. KERR. Without objection, they will be made a part of the record.

THURSDAY, MAY 24, 1951.

(The subcommittee resumed its hearings at 10:30 a. m.; present: Messrs. Cannon, Kerr, Rabaut, McGrath, Davis, and Ford.)

Mr. RABAUT. The committee will come to order.

Mr. DONNELLY. May I proceed, Mr. Chairman?

Mr. KERR. Yes.

INFORMATION DESIRED BY SUBCOMMITTEE

Mr. DONNELLY. General, this morning at 9:45, at the direction of Chairman Cannon, a telephone call was made, I understand, to General Chorpening——

General CHORPENING. Yes.

Mr. DONNELLY (continuing). Asking that certain documents be produced here for the examination of the committee this morning, totaling six in number. I have the list before me, and I will read them.

1. Memorandum identified by Mr. Faison, page 8 of transcript, as from Faison to Bottoms, relating to Schulte interview of barge operators. That is a typographical error. Barge is written as large.

2. A copy of the definite project report for the Gainesville lock and dam, transcript page 23.

3. Slichter file from which you identify what he called DPR for Gainesville lock and dam.

4. Estimated total cost of project, fiscal year 1949, when they were asking for construction funds—transcript B–1, B–3.

5. Estimated total cost of project in fiscal year 1951, ditto page B–6.

6. Latest publication of commercial statistics by Corps of Engineers, dated 1950 for 1949.

General, that is the list of the six documents. I have been handed some documents in the last little while which I understand are being submitted in response to that request. Let us take the first item.

Memorandum identified by Mr. Faison as from Faison to Bottoms, Schulte interview with barge operators.

When we started this hearing on Tuesday of this week, May 22, General Pick, you may recall testifying that you recalled reading the memorandum. In addition, Mr. Faison in his testimony identified it clearly. We have asked for that memorandum. In response I have been handed something which is not the same document as that

requested. In lieu of that I have been handed a third page of the document which bears the initials "H. R. F."; the page number at bottom, 2, shown here, document 1. I already have a photostat of that page 2, and it appears from files of the Corps of Engineers as the third piece of paper and that the photostats were numbered on the lower right-hand corner, 3 of a series of photostats numbered 7, 8, and 9.

The paper that I refer to contains one paragraph with the initials "H. R. F." identified at the bottom and as photostat 9 and identical with that which was furnished us here a short while ago.

The document furnished is not the document requested, and we would like to have that which we have asked.

General PICK. Mr. Chairman, I am not familiar with the request that has been made of my office this morning. I do not know that list of documents. I do not understand what the document was that Mr. Donnelly had there. I would have to ask Mr. Faison to testify as to whether or not that was the document which he had in mind the other day when he was requested. I do not know anything about them, Mr. Donnelly.

Mr. DONNELLY. All right, General. I might ask at the outset, so we will not have confusion in the record, that the documents furnished this morning by the Corps of Engineers and so identified, be marked by the reporter as "Exhibit 1."

(The document referred to was marked "Exhibit 1, May 24, 1951.")

Mr. DONNELLY. And may I ask that these be marked as one exhibit, 2a, 2b, and 2c.

(The document containing three pages was marked as "Exhibits 2a, 2b, and 2c.")

Mr. DONNELLY. For the record, the document identified in the lower right-hand corner of photostat 7 is exhibit 2a.

The document identified for the record as exhibit 2b is the photostat marked in the lower right-hand corner, 8.

And the document identified by the reporter as 2c is marked in the lower right-hand corner as photostat 9.

Now, Mr. Faison, I want to hand you exhibits 1, 2a, 2b, and 2c, and ask you to examine them [handing documents to Mr. Faison].

General PICK. Go ahead.

Mr. FAISON. Mr. Chairman, as I identify this, it comes from the files of the Economic Division, which is a division of the Board of Rivers and Harbors. It is not official files. It is a file that I keep on file of a stack about that high [indicating]; every action that we take on making these surveys. This is something that was asked for, to be prepared following the comparative cost of transporting freight on the proposed waterway under three conditions.

In order that I can make clear, I am going to have to ask counsel to explain to me in which one I made the error. This was not—this was what you asked for.

Mr. DONNELLY. The document the committee has asked for, Mr. Faison, you identified yourself in the record, as a document from you to Mr. Bottoms, who was in Mobile with respect to interviews by Mr. Schulte of the Corps of Engineers with barge operators in New Orleans.

Mr. FAISON. Yes; they were identified, but I remember—recall the document and I have conceded everything you said about it and I did find a copy and delivered it over to the Chief's office and that evidently

is the only copy we have and will be glad to put that in. We would like to keep a copy for my file.

Mr. DONNELLY. Mr. Faison, what you have there is not what the committee is asking for—document 2*a*, 2*b*, and 2*c* are addressed by you to Colonel Feringa.

Mr. FAISON. That is right. This is the document you are speaking of [indicating]. It is the office memorandum.

General PICK. This was handed to me after I got home last night [indicating]. I do not know whether this is what you are talking about.

Mr. FAISON. This is the only copy that I have.

Mr. DONNELLY. This is something that was handed to General Pick. Let it be marked an exhibit——

General PICK. I understand you want that put in the record?

Mr. DONNELLY. Let us have it marked.

General PICK. I do not want to put it in the record.

Mr. DONNELLY. Is it from the files of the Corps of Engineers?

General PICK. I do not know; I do not know where it is from. It was handed to me yesterday afternoon.

Mr. DONNELLY. By whom?

General PICK. Mr. Faison.

Mr. DONNELLY. Mr. Faison, is the document that General Pick has from the files of the Corps of Engineers?

Mr. FAISON. It is from my own personal files; it is not from the official files of the Board. No Board member or resident member has ever seen it as far as I know. All of these papers that you have produced, extracted for photostats, are simply my own records of what we do and what we disagree about; and this is one of them. But I will say that I think that—and I am perfectly willing to stand behind the memorandum.

Mr. DONNELLY. Mr. Faison, did you write that memorandum in the course of your official duties as an employee of the Corps of Engineers?

Mr. FAISON. Yes.

Mr. DONNELLY. All right. Please mark that, Mr. Reporter, as exhibit No. 3.

(The document referred to was marked "Exhibit No. 3," May 24, 1951.)

General PICK. Have you another memorandum that Mr. Donnelly is referring to, Mr. Faison?

Mr. FAISON. No. He has referred to this that was sent over this morning.

General PICK. He is referring to another memorandum. Can you identify it a little bit better, Mr. Donnelly?

Mr. DONNELLY. I will identify from the testimony of yourself and the testimony of Mr. Faison; when our man went to Mr. Faison's office he was informed that certain files in which the committee and its investigative staff were interested had been removed from the office, and taken to the office of the Chief of Engineers. They made arrangements with Colonel Smyser and with the office of Mr. Faison that the Corps of Engineers would furnish the photostats of these documents.

We are furnished what purports to be copies, photostats of these documents, with the exception of some, including the one I am about to inquire now.

General Pick's testimony on Tuesday reads: "Mr. Faison identified it in his testimony as the memorandum written by him to Mr. Bottons' assistant who was at Mobile, Ala., with respect to the interview by engineer Schulte, of the Corps of Engineers, with the barge operators in New Orleans and Mobile." That is the memorandum that we now want.

General PICK. Mr. Donnelly, I remember the testimony; I remember the reading of the stack of papers that were among the first photostats. I remember reading a memorandum to Bottoms. Was it signed by Bottoms? It was Bottoms; either from Bottoms or to Bottoms and of where he was interviewing people in Mobile and New Orleans, shipping people, and I understood that that had been photostated.

Now have you any exhibit that I could look at to see whether I can identify papers that I read that had been photostated, if they were not photostats?

Mr. DONNELLY. General, I have here a memorandum dated February 20, 1945, from the engineer about whom we are talking, Howard J. Schulte to Mr. E. E. Bottoms.

That is dated February 20, 1945. Subject: General Comments Relative to Traffic Movement on the Intercoastal Waterway Between Mobile and New Orleans.

I would like now, before I hand these to you, so the record will be clear, to ask the reporter to mark these as exhibits 4a, 4b, 4c, 4d, and 4e.

4a will be a part of these photostats identified in the lower right-hand corner 33; 4b will be 34; 4c, 35; 4d, 36; and 4e, 37. Will you please mark them?

(The documents referred to were marked, respectively, "4a," "4b," "4c," "4d," and "4e," May 24, 1951.)

General PICK. May I see if I can identify them?

Mr. DONNELLY. General, you are now scanning the documents identified as 4a through 4e. Do you recall having read the document which comprises one of the reports of Engineer Schulte?

General PICK. Yes. This is one of the documents that I read in that group of papers that were photostated.

Mr. DONNELLY. Now, General, may I ask you this question, with regard to the documents which were removed from Mr. Faison's files, and delivered to the Chief of Engineers, were they delivered to you at your office or to your home?

General PICK. Mr. Donnelly, the only papers that I have seen that were taken from the Board of Rivers and Harbors files was that group of papers which I was told were the ones that were photostated. This is one of them. I do not know anything about any other papers being removed.

Mr. DONNELLY. The staff of this committee was informed that there were large packets of such documents removed from the files of Mr. Faison's office and delivered to the Chief of Engineers. Now were they delivered to your office?

General PICK. They were not delivered to me, and I do not know whether they were delivered to my office or not; I do not know whether they were removed from the files of anyone. I remember reading this [indicating].

Mr. DONNELLY. So that the record may be clear, may I ask that all of these exhibits, 1 through 4, including the subheadings, that is,

4a, 4b, 4c, 4d, and 4e, and the same with respect to the exhibits marked "2" and "3" be inserted in the record at this point.

Mr. RABAUT. Without objection.

(The exhibits referred to were received in evidence.)

(Exhibit 2a, 2b, and 2c is as follows:)

MEMORANDUM

MAY 24, 1946.

Subject: Comparative Barge Line operations via the lower Mississippi River and via the proposed Tombigbee-Tennessee Canal route.

For: Colonel Feringa.

1. In response to the request of Congressman Rankin, the following comparative operating costs are given on the basis of a 7,000-ton tow and a 14,000-ton tow, via the lower Mississippi River and the proposed Tombigbee-Tennessee Canal route:

Tow of 7,000-ton pay load

From—	To—	Cost		Savings per tow
		Via existing route	Via Tennessee-Tombigbee connection	
New Orleans	Paducah	$11,830	$10,570	$1,260
Mobile	do	13,720	6,230	7,490
Demopolis	do	15,750	4,550	11,200
New Orleans	Cairo	11,340	10,920	420
Mobile	do	13,300	6,580	6,720
Demopolis	do	15,260	4,270	10,990

Tow, 14,000-ton pay load

From—	To—	Cost		Savings per tow
		Via existing route	Via Tennessee-Tombigbee connection	
New Orleans	Paducah	$23,660	$21,140	$2,520
Mobile	do	27,440	12,460	14,980
Demopolis	do	31,500	9,100	22,400
New Orleans	Cairo	22,680	21,840	840
Mobile	do	26,600	13,160	13,440
Demopolis	do	30,520	8,540	21,980

With typical tow of 3,500-ton pay load

From—	To—	Cost		Savings per tow
		Via existing route	Via proposed route	
New Orleans	Paducah	$7,350	$4,410	$2,940
Mobile	do	8,645	3,115	5,530
Demopolis	do	9,660	2,135	7,525
New Orleans	Cairo	7,070	4,620	2,450
Mobile	do	8,365	3,325	5,040
Demopolis	do	9,380	2,345	7,035

It will be noted that while the savings per tow are greater for the larger tows, the unit savings per ton are greater for the 3,500-ton tow adopted in the report. The Army engineers' report gives the comparison of costs under the most favorable operating conditions warranted by the limitations of the proposed canal. A tow of five barges and 1,000 horsepower towboat is the best and most economical unit for use on a waterway of the proposed dimensions and the

most satisfactory and appropriate method of handling the prospective traffic. On the other hand a larger tow of from 7,000- to 14,000-ton pay load, if traffic were customarily obtainable in those larger units, would have a distinct advantage over a 3,500-ton tow upstream on the existing open Mississippi River route, so that the greater the departure from the optimum tow assumed in the report the less advantage there would be in using the proposed new route. For example: a five-barge tow, averaging 3,500-ton pay load (including return voyage) would obtain maximum economy from the use of the proposed Tombigbee-Tennessee route. On the open Mississippi a 2,000 horsepower towboat could be used to advantage to move 100 percent more cargo at 50 percent more cost. This type of 2,000-horsepower towboat could not exert its power on the proposed Tombigbee waterway, and could not handle any greater tow than a 1,000-horsepower towboat. The larger tow would move more economically on the open Mississippi but would simply have to be broken up into the five-barge units to navigate the proposed route with a more unfavorable comparison.

H. R. F.

(Exhibit 3 (the missing memorandum) is as follows:)

OFFICE MEMORANDUM

FEBRUARY 19, 1945.

Subject: Tennessee-Tombigbee (Mississippi Sound).

It is believed to be important to emphasize our instructions to Bottoms and Schulte to avoid unnecessary stirring up of prejudice, hostility, and adverse comment among existing water-carrier operators by injudicious inquiries.

We want to get at the facts.

Carrier representatives are prone to stick fast to their presently established routes and practices and to oppose new routes, facilities, cut-offs, etc., with the "let well enough alone" attitude, without investigating the possible advantages of the proposed changes. Their testimony on new projects is not, therefore, always reliable or disinterested, and they should be selected for interviews with discrimination. It would be embarrassing to collect testimony from operators, the large preponderance of which would be unfavorable, even though our surveys otherwise led us to favorable conclusions.

H. R. F.

(Exhibit 4a, 4b, 4c, 4d, and 4e is as follows:)

FEBRUARY 20, 1945.

Subject: General comments relative to the traffic movement on the Intercoastal Waterway between Mobile and New Orleans.

To: Mr. E. E. Bottoms.

1. Reference is made to telephonic conversation this date between yourself and the undersigned. The DeBardeleben Coal Corp., Coyle Lines, will not be contacted. Every effort will be made to avoid indiscriminate interviews relative to the above-mentioned subject. However, in some cases it is very hard to determine the other person's viewpoint until you have talked with him for a short time and then every attempt has been made to make a diplomatic exit without disclosing anything of a controversial nature. In this connection, everyone that the undersigned has conferred with to date has been very cooperative and in most instances have expressed a high regard for the Corps of Engineers and at least one (Mr. Guthans whose comments were previously reported but this particular comment was considered irrelevant to the subject, therefore, was not recorded in the résumé of the interview) stated that there was a move on to throw the river and harbor works of the engineers into a political set-up and he would guarantee a strenuous fight against that move by himself and all of his acquaintances who were interested in waterway developments. Mr. Guthans had particular reference to the move toward MVA, and so forth. There is no doubt in the undersigned's mind that while his contacts and inquiries have been confined strictly to the problems of the Mississippi Sound, some of the parties so contacted will associate these inquiries with the Tombigbee project after they have had time to think the interview over. This is particularly true due to the fact that it is logical to believe that the problems of the sound are recognized as a vital criterion to the Tombigbee project by all operators in this locale. Also, in view of the fact that recently about 1,200 inquiries have been sent out relative to the Tombigbee project. The undersigned interviewed several people this date relative to the above subject and a résumé of their comments, and so forth, is given in subsequent paragraphs.

2. Mr. H. B. Collins, superintendent of the Federal Barge Line docks at New Orleans, La. The undersigned contacted Mr. Collins primarily for the purpose of obtaining his recommendation as to whom of the Federal Barge Line personnel to contact relative to the above subject. Mr. Collins suggested that I interview Mr. D. P. Donzales, pilot on the tugboat *Mobile*, for information relative to the conditions across the sound and Mr. Marshall of the main office of the Federal Barge Line located in the International Building, New Orleans, La., relative to an estimate of line haul costs. Mr. Collins stated that he would also recommend interviewing Mr. S. J. Delacruz, master of the afore-mentioned *Mobile*, but he was presently out of town. Mr. Collins stated that the tug *Mobile* was designed and constructed for navigating the sound. She draws 8½ feet and is a twin screw, 1,200 horsepower. The *Cordova* (Federal Barge Line towboat used on the river) is sometimes used across the sound when the *Mobile* is laid up for repair. However, the *Cordova* must await very favorable conditions on the sound to afford a safe crossing. Mr. Collins has not ridden across the sound with a tow and, therefore, his knowledge is gathered from conversation only.

3. Mr. Marshall of the main office of the Federal Barge Line, New Orleans, La. After the undersigned requested costs relative to line haul across the sound, Mr. Marshall referred him to Mr. Powell. Mr. Powell was in conference and the undersigned was then referred to Mr. Macheau. Mr. Macheau assured the undersigned that if such costs were available it would be in his department but that he did not have the data in this form at the present time. I informed him that the Board did not desire to burden his office with too much study in this regard and asked him for an estimate of the costs based on his experiences. He stated that he would rather have some time to work up something on this and asked if he might mail same to me. I informed him that we were temporarily stationed at the Mobile district office and to mail such data as he desired to furnish to this office marked to the attention of Mr. E. E. Bottoms.

4. Mr. D. P. Donzales, pilot on the Federal towboat *Mobile*, which operates across the Mississippi Sound. Mr. Donzales had been with the Federal Barge Line since 1921 and has held pilots' licenses since 1927. Substantially all of Mr. Donzales' experiences have been confined to operations across the sound. The *Mobile* is not frequently used on the river. However, the *Mobile* has been used as far as 200 miles up the Warrior River. When used on the Warrior, the *Mobile* tows up river style (pusher type) but the boat is designed for towing on a hawser. This gentleman is of the opinion that the modern tunnel type river towboat can be safely used across the sound but does not think the stern wheel type nor the old type with wooden housing, etc., could be used. Mr. Donzales states that the Lone Star Cement Co. owns a river type towboat which they use on the Tombigbee River but frequently use same for towing across the sound. This boat has twin 360 horsepower Diesel engine. The Lone Star Cement Co. also owns a 500 horsepower regular tug type boat which they use exclusively on the sound. It is this gentleman's opinion that tugs such as presently used on the sound can successfully tow four or five average-size barges up the Mississippi River. Mr. Donzales stated that modern river towboats were structurally sound for navigating the Intracoastal Waterway but would have to be altered in minor ways such as adding a windlass, etc., on the bow for anchoring purposes; stern towing bits; and in some cases, raise the door sills. Relative to utilizing the various islands for harbors of refuge the gentleman called attention to the fact that running into islands too closely is quite hazardous for the reason that winds change very fast and if caught too close to the island after the wind had changed "island-shoreward" the barges would be grounded. The gentleman believes that in most cases it is less hazardous to anchor the barges offshore and states that frequently they anchor the barges on the hawser line, pull out one barge and run into port. This is done to avoid towing all the barges off course when only one is designated for the port. Also, to avoid the difficulty of handling the entire tow in the port basin. The gentleman is of the opinion that in some places where the swells run in from a southeast wind, jetties would be of assistance as harbors of refuge. This is particularly true around Petit Bois and Dauphin Islands. Petit Bois Pass is the most hazardous of all the passes. Sufficient protection is available to get Petit Bois Pass (going eastward) but sometimes crossing this pass requires 10 to 12 hours delay. This gentleman is of the opinion that a storm signal on the Rigolets or just after leaving the lock at New Orleans would be of assistance to tugs that do not have radios. At the present there is a storm signal at the foot of Esplanade Avenue, New Orleans, La., but that all boats do not have an opportunity to see this, that is, the boats coming through the lock pass this

signal but a good many tows are made up at the lower end of the lock and consequently do not pass the signal. Relative to a storm signal on the Rigolets, this gentleman points out that should the signal indicate a storm the boats going east would have to return west about 10 miles for refuge. If the storm signals were placed in the industrial canal, they could tie up then without the necessity of making the "backrun." The gentleman called attention to the fact that larger type barges were used on the Mississippi River than on the Warrior River due to the small locks on the latter river, consequently, Mississippi River type barges would be difficult to handle through the locks on the Warrior River. The aforementioned boats owned by the Lone Star Cement Co. are named *Lone Star* and *Incor*. The *Lone Star* is the tug type used almost exclusively on the sound while the *Incor* is the company's river towboat which is used frequently across the sound. Mr. Donzales states that the design for the *Incor* was copied from the design of a regular river type tunnel towboat with the exception of the addition of stern towing bits and a windlass and anchor on the bow. The gentleman states that the lock at New Orleans is sometimes very congested, necessitating from 6 to 7 hours delay. The congested periods are usually after the break-up of bad weather when many tows have been waiting to proceed.

5. Mr. H. A. Sawyer, vice president and manager for the Lone Star Cement Co., New Orleans, La. This gentleman stated that his pilots who would have first-hand information relative to my inquiries were out of town for a week or so. However, from his experiences he is of the opinion that the use of modern tunnel type river towboats across the sound would necessitate too many delays in awaiting favorable weather conditions. His company brings river equipment across the sound when operation requires same but are reluctant to do so. He stated that the *Incor* was their river towboat and that they used this across the sound only when absolutely necessary. He states that the *Incor* could not take the rough passes around Dauphin and Petit Bois Islands with any amount of regularity for the reasons that these passes are frequently too rough. This gentleman believes that establishing harbors of refuge at intervals along the intracoastal route would be beneficial, but if jetties were constructed they would have to be of superstrength for his company to take a chance having their boats lay behind same during a very rough sea. Mr. Sawyer states that the tug owned by his company and used across the sound is not used on the river. Their equipment is not equipped with radio. The gentleman states that the company has very little damage to equipment due to the battering effect of barges in a rough sea, etc. Mr. Sawyer called attention to the fact that the barges owned by his company are equipped with rudders which are so constructed that they can be lifted with a windlass when use of same is not required. However, when going through a lock or bridge opening, etc., the rudders are let down and manned by deckhands to assist in the steering and preventing damages. (This seems to be unique equipment but according to Mr. Sawyer, the safety factor will justify the cost of installing the rudders.) Incidentally, Mr. Sawyer worked for the Illinois State Highway about the year 1917 or 1918 and was stationed at Cairo, Ill, for some time, consequently he seemingly has a great interest in the Mississippi River waterway.

6. Mr. Augustus B. Harris, owner of the Augustus B. Harris & Sons Towing Co., New Orleans, La. Mr. Harris states that he usually tows four wooden barges with his tugs. He owns two deep-water tugs and two smaller boats. The larger two of his boats have 250- and 320-horsepower engines respectively and the smaller two have 165- and 120-horsepower engines. (Note: Mr. Harris contemplates replacing the 120-horsepower engine with a 170-horsepower engine within the next 30 days). Mr. Harris states that either one of his four boats takes tows across the sound without difficulty. However, he does not permit his two small tugs to go out unless the weather is very favorable. Mr. Harris does not think the tunnel-type flat-bottom river towboat would be safe operating in the sound for the reason that they do not have enough freeboard. This, according to Mr. Harris, is especially true of the bow of these boats. Also, Mr. Harris is of the opinion that the flat-bottom tunnel types of towboat create considerable vacuum in the tunnel and when on rough water, the strain would be too great for the average type hull. Mr. Harris stated, however, that the semitug type that is now being used on the river could navigate the sound but the delays, necessitated by weather conditions, would be somewhat increased due to the use of the smaller type of tugs. Mr. Harris pointed out that delays were not always due to the limitations of the towing vessel but was a combination of the type of towing vessel and the type of barges towed. He called attention to the fact that if the barges were quite large and loaded heavily there was considerable more chance

of snapping the hawser or breaking the couplings and the tug could not get near the barge to make repairs during a heavy sea, etc. Mr. Harris does not think that harbors of refuge would be very successful as the sand bottom shifts too much to afford the maintenance of a channel into same. Furthermore, the gentleman does not believe jetties could withstand the pressure, etc. The gentleman states that they now take advantage of the lee of the islands and he does not think this could be improved to any great extent. He called attention to the fact that there was one very bad shoal at Bay St. Louis known as the "Square Handkerchief" shoal. Mr. Harris states that when tows run into bad weather just out of Mobile, they run into the Pascagoula River. Mr. Harris states that the stern wheel type of river boat would be unable to tow successfully across the sound for the reason that the wheel would be in the way of the hawser line and also, through the rough passes, the wheel would be out of the water quite a bit of the time. Relative to the average line haul costs (exclusive of terminal or handling costs) Mr. Harris states that he estimates that his tugs will make five trips per month across the sound. The towing rate is 80 cents per ton including the return of the empty barge of which about 50 cents is actual cost. This figure does not include furnishing the barge, hawser line, couplings, etc. If the towing includes furnishing of the barge, hawser, coupling, etc., the rate is $1.06 per ton, including the return of the empty, of which about 76 cents is actual cost. If the operator had a regular two-way load, that is loaded eastbound and westbound, the costs would decrease about 25 percent.

7. In writing the above résumé of the various interviews the undersigned has attempted to convey the opinions and comments of the persons interviewed according to their individual terminology without necessarily adhering to the principals of rhetoric.

HOWARD J. SCHULTE, *Engineer (Civil)*.

Mr. FAISON. May I correct something I said. I am under oath.

Mr. KERR. Yes; you want to make a correcting statement.

Mr. FAISON. When the request was made—something about a week ago, I think, for the second time—to go through this working file of mine, I had taken out some thirty-odd papers: there was one copy, because I did not have the original—there have been numerous papers taken out, but I took out the Schulte papers because I knew that would be the subject of discussion, and I took them over to the Chief's office to talk about them. These people asked me to let them go through and take out these particular papers; and the economist went through and designated, took out the papers and marked them to be taken out. He said there are two missing from the files and I want them.

And I am going to ask your economist to corroborate my answer.

Mr. DONNELLY. I think that what we are interested in is getting a copy of the document which the committee has requested.

Mr. FAISON. But this was not requested. That is the point I want to make; this memorandum was not requested. There were two. I have my people here who were there when they made the request. They said there were two separate papers that they wanted. One was the Thompson letter, the Thompson report, and the other was the Schulte letters, and he got them. There was nothing, no mention about the memorandum, and I am sure that he will corroborate me on that. There has been no disposition to suppress the memorandum.

If you remember, Mr. Chairman, the first day I conceded everything that counsel wished to say about it. There is nothing in that that I am the least bit ashamed of. I wrote it during this survey, and I would write again today under the same situation. I think, as my testimony goes along, the committee will appreciate just the way we conduct these things, and why we wanted to cut off that type of investigation. That we followed up later by a memorandum.

Mr. DONNELLY. Now, since we have the document, and each member of the committee has read it, I think it would possibly be helpful if I would pursue what is involved in this document.

General PICK. Mr. Donnelly, has this question of papers being removed from the files been cleared up?

Mr. DONNELLY. For my purpose, it has been cleared up. We had constantly a series of telephone calls and personal visits made by the staff of this committee to a number of your subordinates, including Mr. Faison. We experienced extreme difficulty in getting the material which we asked for, and by persistent and constant checking with Colonel Smyser, Colonel Cole, and, I understand, with Mr. Treadway, Mr. Mueller, Mr. Faison, and others, we were able, after much persistence, to get the documents which we knew from the investigators to be in Mr. Faison's file.

General PICK. Did you get the papers that you wanted?

Mr. DONNELLY. Yes; the ones that have been produced here for the first time today in response to the request made at the outset of this hearing, and there may be others.

Mr. FAISON. Mr. Chairman, I deny that that paper was requested, was mentioned until this hearing started 2 days ago and I immediately began searching, and I remembered I read it, and I admitted what was in it, and I did find last night or yesterday afternoon; there has been no disposition to withhold anything, and, as you can see from the type of that memorandum, you can see we did not intend to. They have had these papers for 5 months, and they have had the second——

General PICK (interposing). Mr. Chairman, I would like to put the economist on the witness stand to testify as to exactly what happened with respect to these papers, and I would like him to be sworn just like the rest of us.

Mr. CANNON. The gentleman understands counsel represents the committee. It is not customary to swear counsel, nor is it customary to swear members of the committee. That would be in effect trying the members of the committee. I think that——

General PICK (interposing). Mr. Chairman, I am not a lawyer, as you know.

Mr. CANNON. I think the inquiry now pending relates to a matter——

General PICK (interposing). As I say, Mr. Chairman, I am not a lawyer. We do not have counsel. I am trying to clear up this one paper, and God knows I want the committee to have all the papers it wants.

Mr. FAISON. May I make this statement—I am under oath—that I furnished all the papers asked for, as soon as I could physically arrange to do so, and that particular paper was not asked for until the beginning of this hearing, and counsel himself mentioned it, and I conceded it, and immediately started a search for it.

TESTIMONY OF ALEXIS P. BUKOVSKY

Mr. DONNELLY. Mr. Chairman, may I call Mr. Bukovsky?

Your name is Alexis P. Bukovsky?

Mr. BUKOVSKY. Yes.

Mr. DONNELLY. And on behalf of this committee, as a member of the investigative staff, have you not had occasion during the past year to visit the office of Mr. Faison and to examine files of the Corps of

Engineers relative to the proposed Tennessee-Tombigbee waterway?

Mr. BUKOVSKY. Yes.

Mr. DONNELLY. Will you relate to the committee at this time what interviews you had with Mr. Faison last week with respect to the document we are now inquiring about?

Mr. BUKOVSKY. I asked Mr. Faison's clerk for copies of Mr. Schulte's memorandum and for related matter, for related memoranda, and Mr. Faison indicated that they were removed from the files and that he would make photostatic copies of these papers and furnish them to us.

Mr. DONNELLY. Now, Mr. Bukovsky, in your interview and in your examination of the files in Mr. Faison's office in 1950, did you have occasion to read the document I now hand you marked "Exhibit No. 3" [indicating]?

Mr. BUKOVSKY. I believe I had, sir.

Mr. DONNELLY. Did you make a note of that document at the time you examined Mr. Faison's files in 1950?

Mr. BUKOVSKY. No; I did not make a special note, but I remember it was there.

Mr. DONNELLY. Now, after the photostats were produced last Friday by the Office of the Chief of Engineers of the material which had been removed from Mr. Faison's files and especially relating to Mr. Schulte's operations, did you not tell me that was missing, notwithstanding you had seen it?

Mr. BUKOVSKY. I did.

General PICK. Did you ask Mr. Faison to get you a copy of that memorandum on the day when you came to the office?

Mr. BUKOVSKY. You mean the second time?

General PICK. Anytime.

Mr. BUKOVSKY. I asked the first time for a photostat of Mr. Schulte's memorandum and all related material.

General PICK. Is that Mr. Schulte's memorandum [indicating]?

Mr. BUKOVSKY. No. I would classify that as related material.

Mr. DONNELLY. May I show the committee how definitely it is related. We were given a photostat from the same files which has been identified for the record as exhibit 4a through 4e. This document is dated February 20, 1945. It is a request by Mr. Schulte of the Corps of Engineers to Mr. E. E. Bottoms. This is what Mr. Bottoms received as a result of this missing memorandum, identified as exhibit 3, and I read:

> (1) Reference is made to telephonic conversation this date between yourself and the undersigned. The DeBardeleben Coal Corp. Line will not be contacted. Every effort will be made to avoid indiscriminate interviews relative to above-mentioned subject. However, in some cases, it is very hard to determine the other person's viewpoint until you have talked with him. Every attempt has been made to make diplomatic exit without disclosing anything of a controversial nature.

The subject at the top of this document is "General comments relative to traffic movement on the Intracoastal Waterway between Mobile and New Orleans."

Exhibits 4a through 4e, from which I read the first few lines, resulted from production of the missing memorandum designated as exhibit 3, which the committee has read and which is in the record.

General PICK. Mr. Chairman, I would like to ask Mr. Bukovsky if he asked Mr. Faison for the Schulte letter?

Mr. BUKOVSKY. I think I answered that question before: that when I went to see Mr. Faison the first time I asked him for Mr. Schulte's memorandum and the related material.

General PICK. Mr. Faison, did Mr. Bukovsky ask you for the Schulte letter and related material?

Mr. FAISON. I do not recall the related material. He identified two things he wanted, the Schulte letters and the Thompson papers, which we have furnished.

General PICK. Mr. Chairman, I would like to produce——

Mr. FAISON (interposing). They were not together in my files and never have been together in my files.

General PICK. Mr. Chairman, I would like to put in the record at this point that no specific communication has been addressed to the Chief of Engineers for the production or the furnishing or reproduction of any of this material. All of this has been carried on in a most informal manner, and I have only heard about it after the facts.

Mr. DONNELLY. Is Colonel Smyser your executive officer?

General PICK. He is.

Mr. DONNELLY. This request was made initially to Colonel Smyser, your executive officer. We did not want to trouble you, with your many responsibilities, with requests for data from the files. We did what we thought was the appropriate and reasonable thing in directing our inquiry to the executive officer.

General PICK. The point I am making, Mr. Chairman, is that there has been a considerable amount of looseness used in what requests were made, and I do not know of any written memorandum, letter, or any memorandum more than the telephone calls, except that I understand that Mr. Bukovsky went to the Board of Rivers and Harbors and contacted Mr. Faison and asked him for some information. Mr. Chairman, that is all I know about it.

Mr. DONNELLY. I would like to proceed with the subject at hand here and the subject matter here in these documents, if I may.

INTERVIEWS WITH SHIPPERS AND CARRIERS

Mr. Faison, Mr. Schulte, an engineer of the corps, was sent to Mobile and to New Orleans in the early months of 1945 for the express purpose, as the representative of the Corps of Engineers, of interviewing barge operators in New Orleans and Mobile; was he not?

Mr. FAISON. No.

Mr. DONNELLY. He was not?

Mr. FAISON. No; that is not correct.

Mr. DONNELLY. What was his mission?

Mr. FAISON. I beg your pardon.

Mr. DONNELLY. What was his mission?

Mr. FAISON. His mission was to serve on the staff of Mr. Bottoms in contacting shippers and carriers. Now, then, Mr. Bottoms also had the responsibility of contacting the barge lines. The responsibility to contact barge lines was taken away from my Division and given over to the Engineering Division, and Mr. Bottoms had a perfect right to assign Mr. Schulte to anything he wanted; but, as I stated, he wasn't sent there for that purpose. He was not. I did not know his qualifications. He was one of the first statistical men who was accustomed to go out and make contacts with shippers and barge lines.

Mr. DONNELLY. On Tuesday when we opened the hearings, Mr. Faison, you identified Mr. Schulte as a clerk?

Mr. FAISON. Yes; that is correct.

Mr. DONNELLY. Later on you said he was actually an engineer?

Mr. FAISON. Yes.

Mr. DONNELLY. Mr. Bottoms is your assistant; is he not?

Mr. FAISON. He is mine in this case. He was not; and Mr. Bottoms was brought over from the Arkansas survey and put in charge of this survey as my assistant and also as the Engineering Division's assistant. He has had a dual role.

Mr. DONNELLY. In this case we are speaking about, Mr. Bottoms went to Mobile; did he not?

Mr. FAISON. Yes.

Mr. DONNELLY. And Mr. Bottoms reported back to you; did he not?

Mr. FAISON. He reported to me and also to the Chief of the Engineering Division.

Mr. DONNELLY. We understand that. When Mr. Schulte, the engineer, went to Mobile and New Orleans, it was for the purpose of ascertaining whether or not the barge operators, who actually were operating in New Orleans and Mobile, thought they would use the Tennessee-Tombigbee route. That was the ultimate purpose, but Mr. Schulte's inquiry was narrowed down to the question of what the operating conditions were from New Orleans to Mobile across the Mississippi Sound; is that correct?

Mr. FAISON. I cannot answer that question; I was never down there. I think, if you care to have him, Mr. Bottoms can answer it. He has been sworn.

POSSIBILITY OF DIVERSION OF MISSISSIPPI RIVER BARGE TRAFFIC TO TOMBIGBEE

Mr. DONNELLY. Mr. Bottoms?

Mr. BOTTOMS. That is right.

Mr. DONNELLY. Were you in Mobile in February 1945?

Mr. BOTTOMS. That is right.

Mr. DONNELLY. Did you have any supervisory responsibility over Engineer Schulte?

Mr. BOTTOMS. I did.

Mr. DONNELLY. What instructions did you give him with respect to his interviews of the barge operators in New Orleans and Mobile?

Mr. BOTTOMS. As I recall he was instructed to determine from the various barge-line operators whether or not river-type equipment was suitable for use on Mississippi Sound.

Mr. DONNELLY. That is correct, sir.

Now, the whole purpose of the Tombigbee project, or one of the main purposes, is to ascertain whether river-type barges, towboats, and tugboats that move down the Mississippi to New Orleans could economically under operating conditions proceed 156 miles across Mississippi Sound and up to Mobile, and then on their return voyage to the north use the Tombigbee waterway, is that correct?

Mr. BOTTOMS. That is one of the concepts.

Mr. DONNELLY. Yes, sir. So that, when Mr. Schulte made his interviews with the barge operators he was seeking to ascertain operating conditions specifically at New Orleans and Mobile, was he not?

Mr. BOTTOMS. Through the sound.

Mr. DONNELLY. Yes, sir.

Who is F. M. Rodemacher, section head, permit navigation and safety section, Mobile district office, is he with the Corps of Engineers?

Mr. BOTTOMS. He was.

Mr. DONNELLY. Was he with the Corps of Engineers in 1945?

Mr. BOTTOMS. As I recall he was; he was retired a few months after that.

Mr. DONNELLY. I see.

Now, in regard to Mr. Schulte's interview with these barge operators he submitted daily reports to you, did he not, in writing?

Mr. BOTTOMS. Well, periodically. I do not know whether they were each day or not.

Mr. DONNELLY. Well, I have those reports here, and, gentlemen of the committee, so that you may know the relevancy of the reports: The question is whether barges and towboats and tugboats which come down the Mississippi to New Orleans can traverse the 156 miles from New Orleans to Mobile, and how much it would cost them to traverse that stretch of water from New Orleans on the Gulf Intracoastal Waterway across Mississippi Sound from New Orleans to Mobile, for the purpose of determining whether the engineers' estimate of the cost per ton for that haul is 37 cents, which the engineers have told Congress that it is. In the table which we find in the 1945 House Document No. 486, you will find at page 147 of your hearing book, table 18 at the top of the page, and you look down the column headed "Proposed rate," and you find New Orleans to Mobile, and the line-haul cost per ton in cents is $0.37366, roughly 37 cents to traverse that waterway.

(The table is as follows:)

TABLE NO. 18.—*Line-haul costs of barge transportation on selected sections of the Mississippi River system, Mississippi Sound, and the proposed Tombigbee-Tennessee waterway, based on 1939 operations*

Section	Line-haul cost per ton
Existing route:	
Morgan City to Plaquemine	$0.08375
Plaquemine to Cairo	1.78573
New Orleans to Cairo	2.01901
Baton Rouge to Cairo	1.74031
Cairo to dam No. 53	.03716
Dam No. 53 to Paducah	.04337
Proposed route:	
Morgan City to New Orleans	.14806
Baton Rouge to New Orleans	.10804
New Orleans to Mobile	.37366
Mobile to Paducah	.89014
Paducah to dam No. 53	.04337
Dam No. 53 to Cairo	.01440

Mr. DONNELLY. Now, that is one of the basic factors in the economic ratio that has been worked up by the Corps of Engineers for this project. It was used by the corps to compute the savings purported to be enjoyed on the proposed project, as shown in the following table contained in the corps' 1945 report:

TABLE 19.—*Typical savings per ton in line-haul costs via proposed Tombigbee-Tennessee waterway as alternative route to upstream movement on the lower Mississippi River*

Origin	Destination	Line-haul cost per ton		Savings per ton via Tombigbee-Tennessee
		Via Mississippi	Via Tombigbee-Tennessee	
Morgan City, La	Paducah, Ky	$1.95	$1.41	$0.54
Do	Cairo, Ill	1.87	1.47	.40
Baton Rouge, La	Paducah, Ky	1.82	1.37	.45
Do	Cairo, Ill	1.74	1.43	.31
New Orleans, La	Paducah, Ky	2.10	1.26	.84
Do	Cairo, Ill	2.02	1.32	.70

OPERATING CONDITIONS FROM NEW ORLEANS TO MOBILE ACROSS MISSISSIPPI SOUND

As indicated on Tuesday of this week, we have all of the photostats of these interviews, at least we understand we have, and to save the time of the committee rather than reading from all of them, I would like to insert them all in the record, and to read from direct quotations in them, if I may.

(The entire group of photostats are printed below in the appendix.)

Mr. DONNELLY. The first interview we have is that of Mr. Rodemacher of the Mobile district office, Corps of Engineers, with Mr. Harry G. Locke, retired, concurring. Mr. Bottoms, who was Mr. Locke?

Mr. BOTTOMS. Mr. Locke, as I recall, either had just retired or was to be retired as a captain with the engineer department at Mobile, captain of a boat.

Mr. DONNELLY. The report with respect to this interview with Messrs. Rodemacher and Locke was rendered February 14, 1945, by Engineer Schulte to Mr. Bottoms, and we have this quotation:

> Relative to harbors of refuge, it is the opinion of the above-mentioned gentlemen that these would be unnecessary for the reason that ports sufficient in depth and width to harbor the towing vessels are available about every 20 miles on the coast and the barges could be anchored just outside of said ports with a reasonable degree of safety in the average blow. Winds of a higher velocity than average would be reported sufficiently in advance to afford the taking of a necessary precaution by operators, such as delaying the trip, etc. The frequency of these necessitated delays could not be estimated. In this connection, attention was invited to the fact that at one time the construction of a refuge harbor on Dauphin Island was contemplated by the Coast Guard but later abandoned.

Dauphin Island, Mr. Bottoms, is one of the chain of islands forming the south boundary of Mississippi Sound; is it not?

Mr. BOTTOMS. Yes.

Mr. DONNELLY. Are there any harbors of refuge on the Gulf Intracoastal Waterway traversing Mississippi Sound between New Orleans and a point directly below Mobile Bay?

Mr. BOTTOMS. Do you have reference, sir, to the memorandum you just read, that type of harbor refuge, is that what you mean?

Mr. DONNELLY. Is there more than one type of harbor of refuge?

Mr. BOTTOMS. Well, I believe the report of the memorandum indicates that there are harbors on the Mississippi Sound to which they could go for refuge.

Mr. DONNELLY. Now, the question is, Are there any harbors of refuge on the Gulf Intracoastal Waterway between New Orleans and Mobile?

Mr. BOTTOMS. As such?

Mr. DONNELLY. As such.

Mr. BOTTOMS. I cannot answer that off-hand.

Mr. DONNELLY. Mr. Faison, can you answer that question?

Mr. FAISON. No, I cannot; except to say that all of the harbors there are harbors of refuge.

General PICK. What are the harbors there, Mr. Faison?

Mr. FAISON. They are Gulfport, Biloxi, Pascagoula, and Pass Christian. That is all protected there for the 26 miles [indicating] that is all in protected canals.

Mr. DONNELLY. In other words, the Gulf Intracoastal Waterway between New Orleans and the point directly south of Mobile Bay is protected?

Mr. FAISON. Yes.

Mr. DONNELLY. Is that your testimony?

Mr. FAISON. Yes.

Mr. DONNELLY. All right, sir.

General PICK. You did not answer the question fully.

Mr. DONNELLY. The total distance from New Orleans to Mobile on this Gulf Intracoastal Waterway system runs 130 miles from New Orleans, running east?

Mr. FAISON. That is right.

Mr. DONNELLY. To a point in Mississippi Sound at the mouth of Mobile Bay, south of Mobile.

Mr. FAISON. That is right.

Mr. DONNELLY. Then there is in there a space of 26 miles up Mobile Bay from that point to Mobile.

Mr. FAISON. That is the ship channel, light-draft traffic hugs the shore.

General PICK. It might be well to bring out, Mr. Chairman, just exactly what he means by hugging the coast. That line comes out there and goes right up the main channel. That is not the correct location of the Intracoastal Canal. It comes across that bend, and comes into the sound. It does not go out there and go up into the main channel, but hugs the shore.

This Intracoastal Canal comes across here [indicating on map] and then cuts through this point here and comes up the shore line, not up in the center of the harbor.

Mr. DONNELLY. General, while you are here, I have an official map of the Corps of Engineers which bears directly on what you are now saying. I offer this as charts Nos. 3 and 4, showing the course of the Gulf Intracoastal Canal, and invite your attention, General, to chart No. 4 which shows the Gulf Intracoastal Canal, and then shows the Mobile Ship Canal.

(NOTE.—These charts are printed earlier in the hearings.)

Mr. DONNELLY. I would like to ask you whether or not that does not approximate the same line on the big map which we have here that you just pointed to?

General PICK. It does on this map, but I am positive it cuts off this point there.

Mr. DONNELLY. Is what you just looked at, chart No. 4 an official map of the Corps of Engineers?

General PICK. It is.

Mr. DONNELLY. Thank you, General.

General PICK. I would like to point out while I am up here that the Intracoastal Canal from New Orleans across the sound comes out through the canal from the industrial basin at New Orleans off the Mississippi, and goes through land all the way out to Pass Christian, and then it goes into Mississippi Sound.

The reason I know this, Mr. Chairman, is I surveyed this route myself, and I made a personnal survey of it. Then it follows through the sound inside of this chain of islands across here [indicating].

The harbors that they were talking about were well-established harbors here at Pass Christian, Gulfport, and Pascagoula, and, of course, they are harbors of refuge.

The point that the counsel is making, and I think it is one that should be cleared up, he is talking about harbors of refuge having been built along this chain of islands across here [indicating on map]. I know of no harbors of refuge having been built along this chain of islands.

Mr. DONNELLY. While you are there at the map, may I ask you this question——

General PICK (interposing). Now, then, I would like to have a check made as to the mileage across the sound. Do you recall that figure?

Mr. FAISON. It is 104 miles to the bay, I think.

POSSIBILITY OF CONGESTION AT NEW ORLEANS LOCK

Mr. DONNELLY. General, while you were at the map, you referred to the lock here just outside of New Orleans. What is the name of that lock, sir? Is it known as the industrial canal lock?

General PICK. The industrial canal lock, I believe.

Mr. DONNELLY. What is the size of that lock, is it 75 by 640 feet?

General PICK. It is a ship-canal lock built by the city of New Orleans. I do not know the dimensions of it. It was not built as a barge-line-canal lock. It was built as a ship lock to get into the inner basin. They have developed an inner basin harbor there, and when the Intracoastal Canal was authorized and built the route went through that lock.

Mr. DONNELLY. Now, General, with respect to the lock, any river barges that would come down the Mississippi to New Orleans, and then cross the Gulf Intracoastal Canal from New Orleans to Mobile would have to go through that lock, would they not?

General PICK. That is correct, sir. The inner basin canal lock there is a ship lock, as I say. The canal comes up across the river there and goes into the river and then into the canal on the south side of the river there in the Intracoastal Canal. The new lock there now is 110 by 600.

Mr. DONNELLY. That is a new lock?

General PICK. Yes.

Mr. DONNELLY. When was that constructed?

General PICK. Harvey lock was constructed, I do not know—I got it designed in 1928 or 1929. It was built shortly after that. In addition to that a new lock has just been built just below that because there is so much lock traffic there that one lock won't carry it, and

the new lock which has not been put in operation, but is completed now, is 110 by 600.

Mr. DONNELLY. These new locks you are pointing to run south of New Orleans, going down the Mississippi to the mouth of the Passes?

General PICK. Oh, no, into the Intracoastal Canal, which goes across here [indicating].

Mr. DONNELLY. You are pointing to the west. We are considering the Gulf Intracoastal Canal running from New Orleans to the east.

General PICK. There is no lock on the Gulf Coast Intracoastal Canal running east from New Orleans.

Mr. DONNELLY. Now, General I have here a statement from the American Waterways Operators, Inc., are you familiar with that organization?

General PICK. Yes, sir; I know of them.

Mr. DONNELLY. That organization represents a large number of barge operators, operators on inland waterways, does it not?

General PICK. I do not know how many they represent. They do represent, I suppose, a number of them. I do not know how many.

Mr. DONNELLY. Now, General, the American Waterways Operators, Inc., have pointed out on page 9 of their special bulletin No. 6, which relates exclusively to the proposed Tennessee-Tombigbee River waterway, that the industrial canal lock of 75 by 640 at New Orleans would be extremely congested if the proposed Tombigbee waterway were built and would result in serious delays in the movement of tows from New Orleans to Mobile. Do you agree with that?

General PICK. No, sir; I do not agree with that.

Mr. DONNELLY. Why don't you, General?

General PICK. Because I do not think it would. That great big lock there is not used so much because most of the ships that come into the harbor at New Orleans have about 12 miles of docks to dock and unload their cargo from in the river and when they go into the lock and go through the lock to get into the inner basin, then it takes time, and it costs them money.

Mr. DONNELLY. General, may I ask you a categorical question?

General PICK. I do not know how much other tonnage has moved up there, but when I used to be district engineer at New Orleans not many ships went in there.

Mr. DONNELLY. But if the proposed Tombigbee waterway were constructed, and river traffic from the Mississippi were to move from New Orleans across the sound, across the Intracoastal Canal to Mobile, there would be considerable congestion at this lock, would there not?

General PICK. That would be only relative. I do not know how much congestion you would have there. That would be probably less on an average than the inner passage had for an integrated tow, for the amount of tonnage that we have discussed in this report. I do not think it would be anything serious.

COMPOSITION OF AN INTEGRATED TOW

Mr. DONNELLY. Now, General, what do you mean by the type of integrated tow: how many barges, how many tons, and how many towboats or tugboats?

General PICK. Since we are testifying in certain language I would like to ask Mr. Faison to answer that question.

Mr. FAISON. I have in mind the kind of integrated tow that travels now on the Mississippi River system. The most efficient tow that I know of, and the trend of the shipbuilding is toward it, consists of about three barges of 290 by 50 feet with a capacity of about 3,000 tons each—I think it is 2,900 tons, except in an integrated tow the middle barge is square-ended and carries more tonnage, so that a tow of three barges, 290 feet long by 50 feet wide carries about 9,000 tons.

I happen to know about those tows because I have ridden a couple of times on them to see how they operate, and they can make lockage of the 110 by 600 foot standard locks that we expect to have here on this waterway and all of the waterways up in the central part of the country, they can make lockage without a double trip, a very efficient operation. They can also navigate every one of those locks we are proposing, they can go into this lock that he is speaking of, the industrial canal lock in two sections. It would require, I imagine they would have to push two barges in and then put them through and then push two others through, but there is very little difference in elevation there. They do not have to wait.

COMPUTATIONS BY ENGINEERS OF LINE-HAUL COSTS

Mr. DONNELLY. Mr. Faison, I have here the work sheets of Dr. Kelso, which resulted in the figures which the members of the committee see in table 18 on page 147 of the hearings. Who is Dr. Kelso?

Mr. FAISON. Dr. Kelso was Chief of the Research Branch of the Economics Division of the Board. Before that he was Assistant Chief of Economics of the Board for Investigation and Research for Transportation for the Government. He was a qualified waterways economist, recognized as outstanding by the Interstate Commerce Commission economists.

Unfortunately, he died some 2 years ago, and I am having the burden of having to explain, of going back and explaining these details that I know are right now and were right then, but it takes me quite some little time to do it.

Mr. DONNELLY. Do you recognize this as one of Dr. Kelso's work sheets?

Mr. FAISON. I can't say that I recognize it as that. In fact, I see someone else's initials up there, they are "J. McM." However, I imagine if it is Dr. Kelso's, if you tell me what you are trying to prove I can concede it because you are talking about 1945 and 1951 all in one sentence.

Mr. DONNELLY. The reason I am talking about 1945 is that the savings per line-haul ton in these tables now before the committee are based upon Dr. Kelso's work sheets back before the 1945 table was constructed; is not that correct?

Mr. FAISON. Yes.

Mr. DONNELLY. So that there will be no confusion about them, let me say to the committee that these were produced pursuant to a request of the committee to produce the work sheets of Dr. Kelso from the files of the Corps of Engineers.

Mr. FAISON. I do not identify them as such.

Mr. DONNELLY. Well, who can identify them so there will be no confusion about it?

Mr. FAISON. I do not know.

Mr. DONNELLY. These came from your own files, did they not?

Mr. FAISON. I can't identify them—if you could see that stack of files, and you are asking me to identify penciled work sheets; I cannot do it. I have no doubt—if you say you found them, I am not going to contest it.

Mr. DONNELLY. I would like to have these work sheets identified for the record as 5–A through 5 whatever letter it is, so that there will not be any question about them.

General PICK. There is a man's name on here by the name of McManus. Here is Kelso on one of these.

Mr. FAISON. I will identify them as a unit. Some have Dr. Kelso's, and some have McManus' name on them.

Mr. DONNELLY. It is recognized by Mr. Faison that some of these were Dr. Kelso's work sheets, and they were produced pursuant to that request.

Mr. FAISON. I can identify two of them, Mr. Chairman. I believe, in order to save time, it would be well if I conceded what the gentleman is trying to prove, which is that the costs that were introduced into the report in 1945 represented the situation as it was then. I will gladly concede that, to back up this table 18.

Mr. DONNELLY. All right, sir. Let the reporter mark these. Have you kept them in order?

Mr. FAISON. No, sir; I am moving them around because I am trying to get Dr. Kelso's here among the others.

(The documents above referred to were thereupon marked "Exhibits 5–A, 5–B, 5–C, 5–D, 5–E, 5–F, 5–G, 5–H, and 5–I.")

Mr. FAISON. Mr. Chairman, I would like the committee to understand that all of this whole file are scratch sheets. We were trying out one calculation after another, and part of us were in Washington, and part in Mobile, and ordinarily we would have talked these out across a desk. Instead of that we were sending them back and forth, and so that is here on paper. While I am willing to back up anything we did, and anything in that file as showing that we did it properly, competently, and conscientiously, I do say that if an investigator is trying to find something that contradicts something else that it would be an investigators' paradise, because we got everything in there, including the scratch sheets when we started, and we were trying to get at the right answer.

Mr. DONNELLY. I am not looking for something to contradict something else. I am looking for, and I explained in the beginning, the work sheets that resulted in the table contained in House Document 486, table 18 which was furnished to Congress by the Secretary of War and the Chief of Engineers.

Mr. FAISON. I will say after we got through going through the scratch sheets we found we had a most accurate table representing conditions as they were then, and I stand behind them.

Mr. DONNELLY. I think, Mr. Faison, the committee will hear more frequently that the barge operators did not say 37 cents from New Orleans to Mobile, as computed by the engineers in table 18, but they said $1, and if they had a load on a return barge it was reduced 25 percent, or to a 75 cents total, rather than the 37 cents shown in table 18.

Mr. FAISON. If he is going to read only the favorable comments out of those letters, there are any number of other things there which should be included.

Mr. KERR. You want to put in all of the letters?

Mr. FAISON. I certainly do.

Mr. KERR. All right; put them in the record.

(As indicated previously, all these reports from Engineer Schulte are printed below in the appendix.)

Mr. DONNELLY. Let me ask you this: Whether all of these calculations were not predicated upon the movement of eight barges consisting of 3,500 revenue tons down the Mississippi to New Orleans, and then back up the Mississippi from New Orleans to upstream points, for the cost per ton on the Mississippi, and then on using the proposed waterway projected on the same tonnage, 3,500 revenue tons, across Mississippi Sound from New Orleans to Mobile and back up the proposed waterway; is that not correct?

Mr. FAISON. I will say that is not a correct statement. I will say this, however, and I think you will be satisfied with what I say, that was used as one typical tow representing this kind of traffic that existed, but they have all kinds of barges. They have standard barges; the eight barges you are asking about are standard 175 by 26 barges, and each one has about 800 tons capacity. The other standard is five barges of about 195 by 35 feet carrying about 1,200 to 1,300 tons each. Those were the standards, the prevailing standards. They have any combination of them, and we tried both the eight barges and five barges—the large size, or jumbos, they were called—and we got the same results practically by either one.

Mr. DONNELLY. Now, the members of the committee saw on Tuesday in the 1943 House hearings the figures published by the Corps of Engineers and submitted by Colonel Feringa to the committee at that time.

Mr. FAISON. But not on this project——

Mr. DONNELLY (interposing). If we must identify them further, here are the 1943 hearings. It was on this project. The reporter has borrowed it, but I have in my hand here the basis of what was printed by the committee; that is a table submitted by Colonel Feringa in 1943. I will read this document dated November 3, 1943, and I will ask the reporter to mark it Exhibit 6–A–B–C, and I will read different remarks from it:

The following computations are based on the average performance of a representative tow of one 1,200-horsepower Diesel towboat and eight barges of various standard types and dimensions loaded with a typical mixed cargo, at 55 percent load factor, of 3,500 revenue tons.

(The matter referred to was marked "Exhibits 6–A, 6–B, and 6–C.")

Mr. DONNELLY. Do you want to make a statement, Mr. Faison?

Mr. FAISON. This estimate that was put in by Colonel Feringa in 1943 was based on a project proposed in 1939, using locks of smaller size than this project. We have been discussing there locks 450 by 75 feet, I think, which was the original plan, and all of those calculations were made as of that date for that type of project.

The calculations that are in the 1945 report which we have been discussing up to now are made on the basis of a full standard-sized lock, 600 by 110 feet, which these tows we have been talking about in

here can make in one lockage, which later I will explain, since they are bringing up the modern towboats and integrated tows which can also use this canal.

Mr. DONNELLY. Now, Mr. Faison, we are not talking about the 10 locks on the Tombigbee-Tennessee waterway from Demopolis up to Pickwick Pool on the Tennessee River. Those locks, as you say, are now increased to 110 by 600 feet, but before the tow gets up to those locks it must cross Mississippi Sound from New Orleans to Mobile; is not that correct?

Mr. FAISON. That is correct.

Mr. DONNELLY. And the question now is whether eight barges of 3,500 tons each can go across from New Orleans to Mobile for the cost shown in the table in 1945 of the engineers, 37 cents a ton; that is the question now before the committee.

Mr. FAISON. Yes, sir.

Mr. DONNELLY. You have identified a 3,500 tow as typical. I have here the 1943 hearings now to which I have referred, and the same quotation I read from Colonel Feringa's report, which was identified as 6–A, appears verbatim at page 28 of the 1943 hearings of the House Committee on Rivers and Harbors on the waterway connecting the Tombigbee and Tennessee Rivers, Ala. and Miss.

MOVEMENT ON GULF INTRACOASTAL CANAL FROM TEXAS AND FLORIDA TO MOBILE

Now, I have here further evidence from the Corps of Engineers that 3,500 tons is a factor and must be considered, because it is the basis of their calculations.

I have a document dated June 20, 1949, which is addressed to the Acting Assistant Chief of Engineers for Civil Works, the Resident Member, Board of Engineers for Rivers and Harbors, Tombigbee-Tennessee Waterway with reference to a request from Congressman Rankin for barge tow costs.

In response to verbal request from Mr. Frank Heller, listed below are estimated barge-tow costs, based on an assumed 3,500-ton tow, from Carrabelle, Fla., and Brownsville, Tex., to Cairo, Ill., Paducah, Ky., and the junction of the Tennessee River and the new waterway, which may be furnished to Congressman Rankin—

And at this point I would like to insert them in the record.

Here is the point:

In the opinion of the board staff, these figures are completely hypothetical, since no prospective commerce is known that will be available for barge movement in 3,500-ton tows, in either direction, between the points specified.

(The document above referred to was marked "Exhibit 7," and is as follows:)

JUNE 20, 1949.

To: The Acting Assistant Chief of Engineers for Civil Works.
From: The Resident Member, Board of Engineers for Rivers and Harbors.
Re: Tombigbee-Tennessee waterway—Request from Congressman Rankin for barge-tow costs.

In response to verbal request from Mr. Frank Heller, listed below are estimated barge-tow costs, based on an assumed $3,500-ton tow, from Carrabelle, Fla., and Brownsville, Tex., to Cairo, Ill., Paducah, Ky., and the junction of the Tennessee River and the new waterway, which may be furnished to Congressman Rankin:

From	To	Cost via Mississippi, per ton	Cost via Tennessee-Tombigbee, per ton	Average savings, per ton
Brownsville, Tex	Cairo	$3.72	$3.32	$0.40
	Paducah	3.80	3.26	.54
	Tennessee-Tombigbee junction	4.12	2.98	1.14
Carrabelle, Fla	Cairo	3.35	1.91	1.44
	Paducah	3.43	1.85	1.58
	Tennessee-Tombigbee junction	3.75	1.58	2.17

In the opinion of the Board staff, these figures are completely hypothetical, since no prospective commerce is known that will be available for barge movement in 3,500-ton tows, in either direction, between the points specified.

HANNIS.

Mr. DONNELLY. So that the committee has the full facts, I have put in the record a map of the Gulf Intracoastal Waterway, and the committee will note from examination of that map that Brownsville, Tex., is on the Gulf Intracoastal Waterway, and that Carrabelle, Fla., is also on the Gulf Intracoastal Waterway.

Now, I would like to read something on the subject of harbors of refuge.

Colonel POTTER. Mr. Donnelly, since I was the addressee of that letter by title, would you mind pointing out to the committee where Brownsville, Tex., and Carrabelle, Fla., are, and bring out the fact that no claim of traffic from those two points via the Tennessee-Tombigbee has ever been made?

Mr. DONNELLY. I would be glad to do it. We are now talking about the movement of a 3,500 tow on the basis of the Gulf Intracoastal Waterway, and I will show this to the members as we go along. Here [indicating] is Brownsville over here, and here is New Orleans, and this is the Corps of Engineers' map. You can see Brownsville, going on the Gulf Intracoastal Canal to New Orleans. Carrabelle is here in Florida, somewhere in the neighborhood of Apalachicola.

Now, the point before the committee is the movement of 3,500-ton tows across Mississippi Sound, which is exposed to the seas, and if 3,500 tons cannot move on the Gulf Intracoastal Canal at other points, it cannot move at this point between New Orleans and Mobile.

Colonel POTTER. You see it says there is no tonnage to move; it cannot move.

Mr. KERR. Off the record.

(Discussion off the record.)

Mr. KERR. All these estimates you are talking about are based upon some other work being done in order that they can carry so much traffic up that river?

Mr. DONNELLY. On the proposed Tennessee-Tombigbee.

Mr. KERR. It is an estimate that if certain things could happen, they could do certain things?

Mr. DONNELLY. Yes, Judge; in order that the economic ratio be established, we have the proposed annual cost of this project in the amount from the engineers, which I have right here. The engineers estimate the total Federal cost of this project—they did in 1945—at $116,000,000, and then we break that down to achieve this ratio we are speaking of, which must be met in order to justify the project, a figure of $5,745,000, which is the Federal annual cost. That is the cost, year by year, throughout the life of the project.

This is the engineers' standard procedure. They take the tonnage they think they will move and multiply it by table 18, which is the savings table, to get the savings.

Mr. FORD. I think that you should ask, or the engineers should volunteer on their own part, as to whether or not there is any difference between the tonnage from Brownsville to Carrabelle and tonnage from New Orleans to Mobile. I think that has some relevance.

Mr. DONNELLY. The points are from Carrabelle and Brownsville, two separate places. Carrabelle is east and Brownsville is west. It is from them, respectively, to Cairo and Paducah. It is not from Brownsville to Carrabelle.

Mr. FORD. If I misinterpreted the point, I would like clarification, either by questions from you or by answers from the corps.

Colonel POTTER. May I make a statement on that? I would like the committee to decide, in view of the personalities involved, whether they want this on the record after I finish, or not.

Mr. RABAUT. Put it on the record.

Colonel POTTER. The request for this information on the movement of tonnage from Brownsville, which is almost at the Mexican border line on the west, and Carrabelle, which is near here [indicating], and is the eastern end of the Gulf Intracoastal Waterway, the movement of traffic from here at Brownsville up the Tennessee-Tombigbee, or traffic from here [indicating] up the Tennessee-Tombigbee, those figures were requested by the man whose name has been given. We are required to answer requests of Congressmen for data, but no part of such movement has ever been included in the justifications for the Tennessee-Tombigbee, and the Corps of Engineers has not, to my knowledge, ever contemplated the movement of traffic from either Brownsville or Carrabelle up the Tennessee-Tombigbee. The data on the distances are a service that we have performed, but we are not standing upon them for a movement of traffic. It is feasible, physically feasible, but we have not contemplated the movement of such traffic.

Mr. DONNELLY. Colonel Potter, in the estimate of tonnage which might move up the Tennessee-Tombigbee proposed waterway, you included 400,000 tons of phosphate rock from Florida; did you not?

Mr. FAISON. Yes.

Mr. DONNELLY. Yes. And Carrabelle is in Florida, is it not?

Mr. FAISON. Yes.

Mr. DONNELLY. And the source of phosphate rock is in Florida, east of Carrabelle; is it not?

Mr. FAISON. Yes.

Mr. DONNELLY. Yes.

Mr. FAISON. But there is no claim of it coming by barge from Florida to this canal. It could not come by barge.

Mr. DONNELLY. Is not Carrabelle on the Gulf Intracoastal Waterway?

Mr. FAISON. Yes.

Mr. DONNELLY. Exactly. Are you telling the committee now that joint rail-haul movement need be made to get the phosphate rock from Florida to a point up north on the Tennessee River?

Mr. FAISON. No; I am saying that a combination ocean vessel-barge is by far the most economical, and is what was contemplated.

Mr. DONNELLY. Is it not a fact that joint rail-haul water, as dis-

tinguished from rail only or water only, is considerably more expensive because of the need of the transfer of facilities at terminal ports to take the phosphate rock from the freight cars and put into the barges; is that not correct?

Mr. FAISON. There is an expense involved. I say ocean vessels.

Mr. DONNELLY. Do you take phosphate rock from Florida by ocean vessel?

Mr. FAISON. Yes.

Mr. DONNELLY. And not by rail?

Mr. FAISON. I do not say you do not take it by rail.

Mr. DONNELLY. If you were to take it by ocean vessel from Florida, which is right here next to the State of Alabama——

Mr. FAISON. That is one part of Florida.

Mr. DONNELLY. There is more Florida extending east and south not shown on this map. If you were to take it to Mobile by ocean freighter, then the shipper would have to pay the cost of moving it from the hull of the ocean freighter into a barge.

Mr. FAISON. That is right.

Mr. DONNELLY. That is more expensive than by moving it by barge from Florida directly across the Gulf Intracoastal Canal to Mobile and on up the proposed waterway.

Mr. FAISON. No.

Mr. DONNELLY. It is not more expensive?

Mr. FAISON. No.

Mr. DONNELLY. For the information of the committee, the Interstate Commerce Commission has estimated the joint rail-water carriage—that is, where they both use rail and water for the movement of the same commodity—approximates only 8 percent of the tonnage that moved in 1949.

Mr. FAISON. Mr. Chairman, joint rail-water haul means one thing, and combination rail-water haul is altogether another. Joint rail-water haul is freight that moves through on a bill of lading from the origin on rail to the destination on water, or from origin on the water to destination on rail, and that is known among transportation people as a joint rail-water haul, and there is not very much of that, proportionately.

We did not contemplate any of that kind of traffic moving on joint rail-water rates. We know that everything does not come to rest at a water port; that a good deal of it is going to move back into the dry-land country by some other means, and that it would have to be transferred from barge to some other means of transportation.

Mr. DONNELLY. Mr. Faison, I have in my hand a book that was very kindly given to the committee this morning by the Corps of Engineers entitled "Commercial Statistics, Waterborne Commerce of the United States for the Calendar Year 1949, Annual Report of the Corps of Engineers, 1950, Part II."

I refer to page 1652, which shows the tonnage of freight traffic moving between Apalachee Bay and Apalachicola River, Fla., 133,596 tons, by the Gulf Intracoastal Waterway. From the Apalachicola River to the St. Andrew Bay, Fla., 214,006 tons. That is this area right here on the map [indicating] on the Gulf. West Bay to Choctawhatchee Bay, Fla., 577,425 tons. Choctawhatchee Bay to Pensacola, Fla.—and now we are over here [indicating] on the map—603,964

tons. From Pensacola Bay, Fla., to Mobile Bay, Ala., 924,372 tons. From Mobile Bay, Ala., to New Orleans, La., 3,109,808 tons.

Now, Mr. Faison, is it not a fact that Mr. Schulte, your engineer, found from the barge operators in New Orleans that they could not move eight barges across the Mississippi Sound from New Orleans to Mobile; that the maximum number was four, or possibly five?

Is that not correct?

Mr. FAISON. With one towboat.

Mr. DONNELLY. Yes, and if you break your tow into two four-barge tows you have to have the additional expense of an extra tugboat.

Mr. FAISON. It is not necessarily required to break them. You can have a tail tug to carry more barges, but you do need extra motive power. That is stated in the report. It does not have to be brought out in cross-examination. The cost per ton for getting it across there, per ton-mile, is twice what we contemplate on the canalized waterway to account for that extra job. It is just about twice, and we put it in there for that reason. We knew there would have to be a booster service for some of that traffic.

HARBORS OF REFUGE

Mr. DONNELLEY. Mr. Faison, in the past the corps has considered the desirability of the establishment by the Corps of Engineers of man-made harbors of refuge on the Gulf Intracoastal Canal between Mobile and New Orleans.

Mr. FAISON. That is not within my province. I have not considered whether they should be or not. My Economics Division does not go into that, but I know it was looked into by the Corps of Engineers.

Mr. DONNELLY. Let me read to you from a memorandum from Mr. Bottoms to yourself, dated May 16, 1945, on the resurvey of the proposed Tombigbee waterway. Mr. Bottoms is your assistant; is he not?

Mr. FAISON. He was then.

Mr. DONNELLY. At that time he was your assistant?

Mr. FAISON. He was also assistant to the Engineering Division.

Mr. DONNELLY. This memorandum is to you (reading):

> The plans presented in the report under review were expanded to include harbors of refuge along the Intracoastal Waterway through the Mississippi Sound so that river towboats could operate over that route and take advantage of a relatively slack-water route from New Orleans to river points upstream from the confluence of the Ohio and Mississippi Rivers in lieu of the relatively high-velocity routes from New Orleans upstream to the main confluence.

Did you consider the desirability of the establishment of harbors of refuge on the Mississippi Sound between New Orleans and Mobile if the proposed Tombigbee project were constructed?

Mr. FAISON. Mr. Counsel, I did not consider it in any official way. That letter was written to me as information by a man who was working for me and the Engineering Division. That was strictly an item of the Engineering Division. General Kingman went down there and organized an inspection trip across, and, as I remember it, went into the situation, and it was decided by the Engineering Division. I considered it because I read the letter, and that is all. I did not have anything to do with whether they would be adopted or not.

Mr. DONNELLY. General Pick, does the $179,000,000 figure for the Tombigbee proposed waterway included in your report to this com-

mittee of April 23, 1951, include the cost of the establishment of harbors of refuge for the protection of river-type towboats and barges from New Orleans to Mobile?

General PICK. Do you mean the cost of the Tombigbee waterway?

Mr. DONNELLY. Does the $179,000,000 which you have reported to this committee on April 23, this year, as the cost of the Tombigbee proposed waterway include the cost of harbors of refuge to be established by the Corps of Engineers from New Orleans to Mobile?

General PICK. No, sir.

Mr. DONNELLY. It does not.

Now, may I read from a statement secured by Engineer Schulte from Capt. Eddy Buck, local manager, Federal Barge Lines, Mobile—and the Federal Barge Lines is the Government barge operation down there.

He agrees highly with the idea of establishing harbors of refuge along some of the islands and is of the opinion that the accomplishment of same would not be difficult in view of the fact that waters adjacent to the islands, which are close to the route, are now of sufficient depth to accommodate a tow of 12-foot draft. The disadvanage to the operators at the present time is a lack of harbors of refuge, which necessitates considerable delays as the vessels do not proceed across the sound until favorable conditions are predicted to last for the duration of the trip of about 35 hours. The captain states that the main difficulty now encountered by light river equipment is the breaking of tow couplings in the rough passes; otherwise, the equipment stands up very well. In this connection, the captain pointed out that establishing a harbor of refuge on Grand Island would be too close to the canal to justify the expenditure, but that Cat Island, Ship Island, Hog Island, Petit Bois Island, and Dauphin Island would be favorable, as the waters around same are of sufficient depth to accommodate the tows and that this depth was of a permanent nature; that is, the sand does not shift so as to fill in the harbors. The captain stated further that these islands furnish fairly good protections to the route at present, especially to south winds, but possibly jetties could be constructed to furnish additional protection from the north winds during the winter months.

Mr. FAISON. Could he also read from those same letters the testimony of the boat operator saying——

Mr. KERR. If he does not want to read them you can read them.

Mr. DONNELLY. They are all in the record.

The point before the committee is the need for harbors of refuge across this sound.

General PICK. I do not know how that comes before the committee because the Corps of Engineers have recommended no harbors of refuge to the Congress across that sound, nor do we have any estimate for them. We have not made any studies to determine the type and size and cost of such works. There is a very great difference of opinion as to whether or not harbors of refuge would be suitable for shipping across Mississippi Sound at those islands.

Colonel Potter, do you have anything that you would like to add?

Colonel POTTER. If I might tie together two facts.

First, Mr. Donnelly, within the last half hour, read a table which indicated at that time over 3,000,000 tons traversed the inland waterway from Mobile, I believe, or Pensacola, to New Orleans, without said harbors of refuge, indicating a considerable amount of traffic without them. This individual indicated, in his opinion, the advisability of harbors of refuge, and that was an opinion that was considered by the Board of Engineers for Rivers and Harbors, which opinion was not accepted as being necessary, the proof for which being

the amount of traffic that now moves, 3,000,000 tons, on that section, which is considerable.

General PICK. I would like to say that we are not in a position to discuss harbors of refuge in Mississippi Sound because we have no studies on them; we have no request for the development of harbors of refuge in Mississippi Sound, and it is a moot question.

Mr. KERR. You have no authorization?

General PICK. No authorization?

Mr. KERR. Nothing on harbors of refuge?

General PICK. No.

Mr. DONNELLY. The relevancy, of course, is apparent to the committee, because in table 18, page 147, which is before the committee, the Corps of Engineers has estimated the cost from New Orleans to Mobile, per ton, of only 37 cents, and the Corps of Engineers recognized when they got up these figures the desirability of going down to the barge operators and finding out what the conditions were, and the Corps of Engineers was advised by the barge operators that they could not carry more than four to five barges across that Mississippi Sound.

Mr. KERR. Do you have any report or investigation that they made of the harbors of refuge?

Mr. DONNELLY. That is what all of these are [indicating], sir. They went to find out the operating conditions across Mississippi Sound and found the operators saying—it is not a protected waterway.

Mr. KERR. Have they ever asked for or recommended any amount of money to build a harbor of refuge?

Mr. DONNELLY. That is just the point.

The $179,000,000 for the proposed Tombigbee waterway does not include the cost of harbors of refuge for river barges and river boats between New Orleans and Mobile, so that it may be necessary to add to the $179,000,000 the extra cost of harbors of refuge down here [indicating] which the Corps of Engineers have not submitted, as the general just said.

VIEWS OF THE BARGE OPERATORS

Mr. RABAUT. How many different inquiries have been made?

Mr. DONNELLY. They made a large number. The report on Captain Eddy Buck of the Federal Barge Lines was dated February 15, 1945. They were getting reports from the barge operators.

Mr. RABAUT. Who is they?

Mr. DONNELLY. Engineer Schulte and his superiors. The interviews were not favorable. They were not finding out what they thought they would find out, and that is the significance of the documents we looked at this morning.

Mr. RABAUT. You say now that they did not get the information which they desired?

Mr. DONNELLY. From the barge operators.

Mr. RABAUT. What is the information they desired?

Mr. DONNELLY. Schulte was getting information from the barge operators that was not favorable to the Tombigbee project, so he was instructed by Mr. Bottoms, who was Mr. Faison's assistant, to be careful, to discriminate in whom he talked to, because the barge operators were opposed to this proposed Tombigbee waterway—they knew

the difficulty of navigating conditions for boats between New Orleans and Mobile, and that was the missing document that we got in here this morning.

Mr. McGRATH. That is exhibit No. 3.

Mr. DONNELLY. That is correct.

Mr. McGRATH. That is the one that General Pick objected to?

Mr. DONNELLY. Yes, Judge.

In the table the engineers computed a cost of 37 cents from New Orleans to Mobile. Here is one of the interviews that Engineer Schulte got, Mr. Augustus B. Harris, owner of the Augustus B. Harris Towing Co., New Orleans.

> The towing rate is 80 cents per ton including the return of the empty barge, of which about 50 cents is actual cost. This figure does not include furnishing the barge, hawser lines, couplings, and so forth, the rate is $1.06 per ton, including the return of the empty, of which about 76 cents is actual cost. If the operator had a regular two-way load, that is, loaded east-bound and west-bound, the costs would decrease about 25 percent.

If you gentlemen will compare that figure, 76 cents a ton, against 37 cents, the one you see in table 18, on page 147, supplied by the Corps of Engineers to the Congress, you can see the difference. This is additional testimony with respect to the cost of freight per ton—not testimony, but an interview by Engineer Schulte with a barge operator. All of these were in February 1945, and all of these were being made in order to compile House Document No. 486, which was submitted by the Secretary of War, transmitting a letter from the Chief of Engineers, dated September 29, 1945.

Here is another interview with Mr. H. C. Jackson and Dr. J. C. Hope, owners of the Jackson Hope Towing Co., Mobile. Also, Capt. Mack Lipscomb, Mobile, Mr. A. T. Beardslee concurring:

> The average towboat makes a round trip per week across the sound. This average allows for delays due to bad weather conditions, break-downs, general maintenance work, etc. The average cost per ton for towing across the sound is estimated by the above-listed gentlemen as being approximately 50 cents for the towing only. That is, usually the barge, hawser line, couplings, insurance, etc., are furnished. However, considering all costs, exclusive of terminal or handling costs, it is estimated to be $1 per ton, which includes the return of the empty barge. If the barges are loaded both ways, that is, east-bound and west-bound, the cost per ton would decrease approximately 25 percent.

It would decrease to 75 cents, so the barge operators told the Corps of Engineers, who sent Engineer Schulte down there for the purpose of finding out, that it would cost 75 cents per ton to move a ton of commodities by barge from New Orleans to Mobile. The engineers at table 18, say 37 cents; yet they knew when they prepared table 18, that the cost was 75 cents, from the mouths of the men on the boats, the barge operators who brave the seas down there.

Mr. RABAUT. Mr. Donnelly, among the letters that you have, have you any justifying the 37 cents charge?

Mr. DONNELLY. No. The 37 cents is a fictitious proposition which is justified only by a mathematical calculation. They take the downstream current of the Mississippi River, which is an average of 2½ miles an hour, according to their figures, and then they say if you go back upstream by the Mississippi it costs 2.579 times more than it costs to go downstream. Then they took the cost over here [indicating], the current of the Tennessee-Tombigbee, and figured that it costs 1.868 times more to move a barge up this way, the Tennessee-Tombigbee, than it does downstream on the Mississippi, so it is a

hypothetical proposition throughout. It is strictly a matter of fitting together a number of imponderables, and they reach the result shown in these tables, which is at variance with the actual operating conditions and the cost of operation.

To go one step further, to give some foundation for the table 18, we have here the genesis of the table. The computations and work sheets of Dr. Kelso produced from the Corps of Engineers. They use a hypothetical tow of 3,500 tons, which is composed of eight barges, so that all the figures are worked at from this angle, using a ratio of upstream-downstream mathematics. They use the hypothetical proposition that 3,500 tons is going to move, and the barge operators told them, as shown by these letters of Schulte, in February 1945, that you cannot take 3,500 tons, eight barges, across the Mississippi Sound. You cannot move more than four and possibly five because in rough seas, as you will see here, if a coupling snaps and they have to tow across the sound—and they cannot push—if the hawser snaps, the letters show that the tugboat cannot get up alongside the barge to put the hawser towline back on the barge, and that means, as you can see, that this hypothesis of 37 cents, compared with the 75 cents a ton which the operators say themselves it will cost, is inaccurate.

Mr. FAISON. Do you want me to interject when the counsel is going altogether wrong?

Mr. RABAUT. Would you like to say something about this?

Mr. FAISON. I would like to back-track by taking this last business.

Mr. KERR. Are you through, Mr. Donnelly?

Mr. DONNELLY. If he wants to make a statement, it is perfectly agreeable to me.

Mr. FAISON. I would like to make a statement about the snapping of the coupling, to begin with.

What I am afraid of is the staff does not know anything about water transportation. What he is speaking of is towing barges across the Mississippi Sound tied together rigidly in a tow as it is pushed on a river. When they are put on hawsers, they do not break except in a hurricane or something like that, and that is the reason they put them on hawsers—because if the sound gets choppy these barges that are lashed together will snap the connection.

Mr. RABAUT. The barges are usually pushed? When you get down into the Mississippi Canal down there, they hitch them differently and pull them?

Mr. FAISON. They would if the weather required. If not, they can go across in good weather in regular push formation.

Mr. RABAUT. Do they do it?

Mr. FAISON. Oh, yes.

Mr. RABAUT. Do they really push them through?

Mr. FAISON. Yes.

Mr. RABAUT. What percentage are pushed, would you say?

Mr. FAISON. Most of them are pulled because most of the traffic on the Intracoastal Canal is just along the Intracoastal. There is no Tennessee-Tombigbee for them to go up.

Mr. RABAUT. Naturally, to be cautious they would pull them?

Mr. FAISON. They would. But we have allowed for them putting them on tow lines and having an extra boat to help them go across the sound.

Mr. RABAUT. I do not understand the use of the second boat.

Mr. FAISON. There is a Coast Guard rule that you can only pull four or five barges in line on hawsers because they become uncontrollable, as you can see. The interviews that he was talking about were made the first week. We interviewed for 4 months to find out about these things.

There is one way that you can pull a tugboat of eight barges and that is to have a tug on the tail to keep the tow from getting out of line and possibly doing damage, and that would be perfectly feasible.

Mr. RABAUT. Does it push or just hold it in line?

Mr. FAISON. It is pulled on a hawser with a tail towboat.

General PICK. That tail towboat back there is to keep a tight line on the tow so that it will not slop around.

Mr. FAISON. It would be practically the same thing to put an extra boat on and take four barges each, and that is what we contemplated in rough weather.

I might put this in. I put this in the record once before, but before he gets too far away I feel that not only my judgment has been impugned, but rather I was doing something not quite according to Hoyle.

We proceeded to investigate and to consult with the barge-line operators throughout the study, and we have received worse answers from some of them than he. We knew even before Schulte got started that the large barge-line operators were opposed to the project. They were not indifferent to it, which they would have been if they thought it was not any good. They were so opposed to it they put on an organized campaign against it, and they got the waterways operators to get out a circular, and for once the small operators, who were for it, and indicated so in our interviews, a great many of them were for it because they could operate at a profit, and they rebelled against the waterways operators representing them.

Now, we had that conflicting information and we investigated. We knew why the barge lines were opposed to it. I do not say they were insincere. I think they were perfectly sincere, but we have, as engineers, to arbitrate between people who are sincere and trying to be fair, and who want to preserve their business as it is. They do not want a waterway cutting up behind them that will let people in to conduct more economical transportation so that they will either have to change their own services or lose their business. These gentlemen were sincere. They were trying to be fair. They were really thinking up all the things they could think of that they did not like about it and they were telling us, and the smaller operators say the opposite. Some of that will appear in Schulte's letters.

I do feel that I am entitled—and I almost feel like rising to a point of personal privilege—to get the committee to consider the reasons for the Schulte letters. That was the first week of the survey. We got two calls, not from my organization down there, but from the Mobile district, and one from the New Orleans district, and some of these operators saying that they resented being approached and that our representative was trying to promote this waterway. They thought that was not the function of the engineers, and we, too, thought that it was not. That is the reason that I called him off, and I am sure that Mr. Bottoms, who passed the orders on, will corroborate me in that. I have it in the files, and I have no doubt that they have it photostated, that I sent a man out in April who got even more opposition. No facts

had changed the picture, but we got more violent expressions of opposition, so we knew that.

Mr. DONNELLY. You started this present statement of yours by saying that the committee's counsel was wrong. The first thing you said was that if the hawser breaks, the tugboat cannot get back to the barge. I did say that, and I have here the corroboration from your files, and this is from an interview had by Engineer Schulte, of the engineers, with Augustus B. Harris, owner of the Augustus B. Harris Towing Co., New Orleans—and I quote:

> He called attention to the fact if the barges were quite large and loaded heavily, there was considerable more chance of snapping the hawser, or breaking the coupling, and the tug could not get near the barge to make repairs during a heavy sea.

Mr. FAISON. Couplings are one thing and hawsers are another. Couplings are where barges are coupled together rigidly. Hawsers are where they are not.

Mr. KERR. The committee will stand adjourned until 2 o'clock.

AFTERNOON SESSION

THURSDAY, MAY 24, 1951.

The subcommittee resumed its hearings at 2 p. m.

Present: Messrs. Cannon, Kerr, Rabaut, McGrath, Davis, and Ford.

Mr. CANNON. Mr. Chairman, in view of the fact that this hearing will be discontinued this afternoon and be resumed at a date to be announced later, it might be noted that at all times during this hearing we have had a majority of the committee present.

All right, Mr. Counsel.

Mr. DONNELLY. May the record show that when these hearings commenced on May 22, 1951, there were present Chairman Cannon, Congressman Kerr, Congressman Rabaut, Congressman McGrath, and Congressman Ford. Throughout these hearings, which commenced at 2 o'clock on the afternoon of May 22, 1951, those four Congressmen were here throughout the proceedings that afternoon.

Congressman Davis came in after the first 20 minutes of the proceedings and remained the balance of that afternoon.

In the proceedings on May 23, 1951, in the morning, Congressman Kerr, chairman, Congressmen Rabaut, McGrath, Davis, and Ford were present. In the afternoon Congressman Cannon, the chairman of the full committee; Congressman Kerr, the chairman of this subcommittee; Congressmen McGrath, Davis, and Ford were present throughout.

A full quorum of the committee was also present throughout all the morning session as of May 24, 1951. Congressman Cannon, the chairman of the full committee, has been present at practically all of the proceedings in all of the hearing sessions.

COSTS ESTIMATED ON SPEED OF MOVEMENT RATIOS

At this point I would like to put in the record computations of the Corps of Engineers based upon the speed of movement downstream in the Mississippi, upstream Mississippi, and upstream in the proposed Tombigbee waterway, to which I referred earlier as the various ratios. To identify this let me ask Mr. Faison if Mr. Betzler is one of your assistants?

Mr. FAISON. Yes; that is right.

Mr. DONNELLY. His name is W. H. Betzler?

Mr. FAISON. Yes.

Mr. DONNELLY. And did he not compile the intraoffice memorandum in the month of May 1945?

Mr. FAISON. Yes.

Mr. DONNELLY. I would like to put in the record at this point appropriate excerpts from the document which covers the ratios, the point I spoke of earlier, and I believe that will be exhibit 8.

(The document referred to was marked "Exhibit No. 8, May 24, 1951," and received in evidence as follows:)

EXHIBIT No. 8; 5-24-51

From: Intraoffice Memorandum, W. H. B., May 26, 1945, page 7.

"* * * the foregoing speed elements were resolved into three representative elements by retaining those for the Mississippi River downstream and upstream and constructing a composite figure for canalized and still water, the result being:

	Miles per hour
Mississippi River, downstream	8.2125
Mississippi River, upstream	3.1835
Composite, canalized, still water	4.3943

It is estimated that the running cost to the barge line increases or decreases according to the average speed maintained by its tows as an indication of the effort expended in the movement thereof and that for identical loads carried equal distances under various waterway operating conditions the average costs would vary accordingly. With this in mind and the speed shown for the Mississippi River downstream being the fastest, representative of the least operating effort or 100, the following operating cost ratios obtain:

Mississippi River, downstream	1.000
Mississippi River, upstream	2.579+
Canalized still water composite	1.868+

These operating cost ratios are used subsequently to obtain relationships in commodity unit costs."

TOWING PRACTICES ON THE MISSISSIPPI RIVER

Mr. DONNELLY. Now in the testimony just before we recessed this morning there was considerable discussion of the type of barges and tows that would move on the proposed waterway, and Congressmen asked the question as to the type of tows and barges.

I think the committee should know that the staff of this committee sent an engineer to New Orleans and to other parts of the area of the proposed Tombigbee waterway in the year 1950. He covered the same ground and ground additional to that covered by Engineer Schulte of the Corps of Engineers.

The report of the staff of this committee, with respect to the type of equipment that would operate is dealt with on page 20, and I would like to read from it.

CURRENT TOWING PRACTICE ON THE LOWER MISSISSIPPI RIVER

Recent years have brought great changes in the towing equipment in service on the lower Mississippi. The advent of the high speed articulated tows composed of barges having long streamlined towing rakes pushed by towboats from 1,600 to 3,600 horsepower has cut the time of 12 to 19 days for the upstream trip from New Orleans to St. Louis to between 6 and 7 days.

The "integrated tow," sponsored by the Federal Barge Lines, was inaugurated with the towboat *Harry Truman* in 1948. This complete unit is 1,200 feet long and 54 feet wide.

And I exhibit at this time a picture showing the latest equipment that has been designed and is in use by the Federal Barge Lines, which shows the type of high-speed articulated tows which cannot be used economically on the proposed Tombigbee waterway because of the size of the tow and because of the fact they are not adapted to the Tombigbee waterway. Now to continue reading:

The "integrated tow," sponsored by the Federal Barge Lines, was inaugurated with the towboat *Harry Truman* in 1948. This complete unit is 1,200 feet long and 54 feet wide. It is built in 11 sections; one long spoon-shaped bow; three small box-shaped barges, 26 by 54 feet; one medium-sized barge, 83 by 54 feet; five large barges, 167 by 54 feet, with the propelling unit, and the towboat *Harry Truman*. All these sections are built to fit snugly together to form one long streamlined vessel without any breaks, thus reducing friction or drag in the water. So far, this is the only vessel of this type in service but results of a 7 months' testing period have convinced the Federal Barge Lines of the desirability of this type equipment for dry cargo, and plans are under way to obtain more equipment of this type.

Now I have here and I offer for the record a publication of the Butcher-Arthur, Inc., an individual barge operator.

Testimony of the engineers have been that 3,500 tons, or the 3,500-ton tow is the type which would use the Tennessee-Tombigbee waterway. Butcher-Arthur points out that it has a large fleet of river equipment, consisting of—

six river towboats, 24 articulated 19,000-barrel oil barges, three combination river and canal tugboats, and six 2,500-ton articulated dry-cargo barges, the first of this type ever built. High-speed towing rakes designed to overcome the common fault of uncontrollability in high winds on narrow waterways, and our own patented retractable fin for added steerage, are only two of the ultra-modern features. This newest and largest high-speed fleet is placed at your service to give you transportation on the water faster than ever before, at rates competitive with those of the largest size tow units on the rivers. An added advantage is their complete flexibility of operating range.

And, I delete a sentence, but the whole thing will be in the record.

This flexibility is the result of standardizing on a 5,000-ton class of tow unit, small enough to be within the storage limitations of most independent jobbers and marketers.

General PICK. Which sentence did you delete?

Mr. DONNELLY. Do you want me to read it? I did it to save time.

General PICK. I would like you to read the sentence you deleted.

Mr. KERR. Yes; read it.

Mr. DONNELLY (reading):

Whether your requirements originate on the Gulf Intracoastal Canal, necessitate navigation of the swift lower Mississippi and the locked pools of the Ohio or terminate on the Kanawha, Butcher-Arthur's new fleet is equally at home in any of the varying conditions encountered from the Lakes to the Gulf.

Mr. KERR. Are you referring to the Tennessee-Tombigbee now?

Mr. DONNELLY. Definitely, because this Butcher-Arthur equipment they are building cannot operate on the Tennessee-Tombigbee waterway on the line-haul cost which is stated here in table 18 on page 147, and the Corps of Engineers has criticized the committee's staff for having assembled this data together. Now, I will read——

General PICK. Mr. Chairman, may I ask counsel if that is an advertisement he is reading from?

Mr. DONNELLY. I have no way of knowing whether it is an advertisement; it is a brochure put out by Butcher-Arthur, Inc.

General PICK. What is their business?

Mr. DONNELLY. Their business is transporting commodities on the inland waterways.

General PICK. Do they indicate they build towboats?

Mr. DONNELLY. Do they build them?

General PICK. Yes.

Mr. DONNELLY. I do not know whether they build them—they have a fleet of boats—or whether somebody else builds the boats for them.

Mr. KERR. Off the record for a moment.

(Discussion off the record.)

Mr. FORD. I think the importance of the matter, Mr. Chairman, has been mentioned by Mr. Rabaut, when he stated it appeared to be an advertisement.

Mr. RABAUT. I do not know it is.

Mr. FORD. Apparently it is something they send to their potential customers who are concerned——

Mr. KERR. I do not know what it is.

Mr. FORD. No; but the type of article sometimes is difficult to determine; I do not know too much about the advertisement; but advertising material of a similar nature in other fields I know as what we call "puffed"—that is the legal phase—and is well known in advertising among a lot of concerns in the country. I am not condemning it, but I personally think that we should accept it for what it may be worth and make some effort to determine just what use can be made of it.

Mr. MCGRATH. I think, Mr. Chairman, that we ought to take it for what it is worth, and give whatever credence to it that the committee thinks the paper is entitled to.

Mr. DONNELLY. I would like to have the record indicate the criticism of the Corps of Engineers to the report of the staff of this committee on this very point, and I refer to page 3, at the bottom of the page, paragraph 7, in which the engineers state:

> The statement that high-speed integrated equipment which cannot be adapted to standard lock sizes is rapidly replacing old-style equipment must be taken as an exaggeration.

This is a concern that hauls many hundreds of thousands of tons of commodities and is using this new high-speed equipment.

General PICK. How many tons do they haul? How much tonnage do they haul?

Mr. DONNELLY. General, they have 24 articulated 19,000-barrel oil barges. I have no doubt that they handle hundreds of thousands of tons, and I have here the tonnage. [Reading:]

> With the completion of the new fleet, Butcher-Arthur's cargo-moving capacity is now in excess of 2 billion ton-miles annually.

General PICK. How many barges in a tow?

Mr. DONNELLY. They said the standardized 5,000-ton class tow unit.

General PICK. How many barges?

Mr. DONNELLY. They do not break it down into barges.

Colonel POTTER. May I ask counsel to read the remaining part of paragraph 7 in our reply; the whole thing hangs together.

Mr. DONNELLY. I will be very glad to read it. I have read the first sentence. [Reading:]

> So far, few such tows are in operation, although several others are under construction or order. For the high-speed through express service described in the

report they are undoubtedly an improvement well adapted to certain limited purposes. This kind of operation does not meet the needs of typical water carrier service. In fact, one of the most important common carrier barge lines operating between Cincinnati and New Orleans adopted the integrated tow system in 1931 and invested a large part of its capital in barges especially designed for the purpose. It was only after several years' efforts to meet the demands of general traffic and to coordinate these special units into the give-and-take operations characterizing freight-carrying services on the inland waterway system, that this carrier abandoned attempts to fit this equipment into tows made up of various sizes and types of barge, in favor of the more adaptable, conventional designs. The maximum usefulness of the integrated tow principle is best applied however to smaller, more conventional powered units which make better speeds through the standard-size locks and channels of the canalized portions of the inland waterway system serving the most important cities of the interior. Such units could navigate the Tennessee-Tombigbee with maximum benefit, the proposed standard lock sizes (which the investigators criticize as "too small for modern equipment") accommodating the same high-powered towboats and tows of like size that navigate the Ohio, Illinois, and upper Mississippi sections of the inland waterway system.

Then we find in the very next paragraph 8:

The integrated tow principle is not, however, best adapted to the preponderance of cargo traffic on the inland waterway system. Detailed observation and study of the operations of representative barge lines, involving the analysis of annual records of point-to-point movements of each individual barge, fully loaded, partially loaded, and empty made by the staff of the Corps of Engineers, is highly revealing of the wide divergence between theory and actual practice. Normally the tows are assembled and disassembled many times during voyages between northern river ports and the Gulf coast, the individual barges of different sizes, types, and purposes being spotted, unloaded, loaded, picked up, interchanged with other boat lines, and otherwise used for every variety of purposes as opportunity offers. In this flexibility of operation lies the inherent economy of waterway transportation. In the case of integrated tows with the five different shapes and sizes of fitted units, it is obvious that the sizes and types cannot be freely interchanged in normal tow formations to fit the demands of general service. Typical barge-line operation is highly similar to the make-up and dismemberment of freight trains of all sizes and types of cars at classification yards along a rail route. And there seems to be no more likelihood of the barges of the five-hundred-odd operating companies on the inland waterways being replaced by integrated equipment than of most freight trains becoming standard, articulated, streamlined units. As for the retarding influence of drag due to restricted width and shallow bottom, this difficulty is more characteristic of open channels, for drag does not occur in slack-water channels except for short distances at the heads of the successive pools, where the project dimensions are controlling.

So, I have read into the record what the Federal Barge Lines have found to be the type of cargo barge unit and power unit, which can be used on the Mississippi River and also what Butcher-Arthur has found.

Now, the committee will note here the statement with respect to the way boats are used and——

Mr. KERR. You wanted to be heard on this, Mr. Faison?

Mr. FAISON. I would like to, shortly.

First, the confusion arises in that he is comparing 1951 on the river with 1945 conditions on the Illinois—I mean on the Tennessee-Tombigbee waterway. The tow that is described there is an excellent tow for the purpose, that is, for carrying liquid cargo in a sealed tow from origin to destination. It operates in a canalized waterway.

Mr. RABAUT. You are referring to the Butcher-Arthur?

Mr. FAISON. Yes; but there are similar ones; there are several companies.

I have ridden a tow similar to that of three barges, 1,015 feet long on the Ohio River up the Ohio River to the Kanawha River, where

there are some locks that are similar to what are going to be on this waterway. It is an excellent operation for the purpose; that was alcohol, practically 10,000 tons, from Texas City to Charleston, W. Va., and there is no reason in the world why they cannot use the Tombigbee-Tennessee just as effectively as they use the Ohio-Kanawha, with the same size locks, being only 50 feet wide.

Those things just add to the advantage of the canalized waterway over the Mississippi, because no matter which kind of tow you are inventing, you cannot get over the fact that the Mississippi has a current of some 2.5 miles per hour during normal times, and 5 miles an hour when the water is high, so you have got to buck the current, and you don't have to buck it over here [indicating].

Possible Movement of Integrated Tows on the Tombigbee

Colonel Potter. May I add just a word about these integrated tows, these Butcher-Arthur type, that we call the Butcher type. This is a relatively short tow; now in the Federal Barge Lines, the *Harry S. Truman* tow is an integrated tow, much larger and longer tow, especially adapted to the express service, and they have set up an express service of so many days from New Orleans to Chicago, New Orleans to St. Louis, and New Orleans, I believe, to St. Paul, although I am not sure of the latter.

Mr. Rabaut. Those tows do go through the 600-foot locks?

Colonel Potter. They go through those locks——

Mr. Faison (interposing). No. They would have to double.

Mr. Rabaut. You mean they would double through?

Mr. Faison. They would have to double to go through. This Butcher-Arthur does not have to double.

Colonel Potter. This is the integrated type of tow. This is used on the Ohio River type of locks, which is the same type of locks we will have on the Tennessee-Tombigbee. The other is not the type that will be used on the Tennessee-Tombigbee. The tow can go through in two sections.

General Pick. By doubling through.

Colonel Potter. By doubling. And you will note the statement here, that was just read that the integrated tow is primarily used for package service. It must be operated with one commodity, or bulk commodity service, which does not depend upon stopping and picking up with outsize barges.

Mr. Faison. I spoke to two of the large companies that have instituted the integrated tow for general cargo purposes, and I have consulted the manager of one of them, and he told me that they thought at the time they had instituted it they would be all right, but they had abandoned it just recently and they are using only one of the special type tows, because they found this was not applicable to the general cargo traffic.

Mr. Donnelly. Mr. Faison shows in table 18 of page 147 of the hearings that the engineers figured 37 cents from New Orleans to Mobile. This table contains the figures showing the per-ton cost from Mobile to Paducah, Ky., via the Tennessee-Tombigbee waterway. Now, the figures in this hearing and in this table are predicated upon that size lock and tow?

Mr. Faison. Yes.

Mr. DONNELLY. Yes. And then if the tow has been split, and double-locked, the cost is increased, in excess of these figures; is that correct?

Mr. FAISON. Yes.

Mr. DONNELLY. So the comparison in table 18 at the bottom of page 147, which shows the line-haul cost per ton by the Mississippi at $2.02, and by the proposed Tennessee-Tombigbee at $1.32, with a savings per ton on the Tennessee-Tombigbee of 70 cents, would fall, and you would not have a saving of 70 cents with a double lock?

Mr. FAISON. May I look at what you have in your hand, and I will hand it right back?

Colonel POTTER. Yes. This is in House Document 486.

Mr. FAISON. If these larger tows were actually used that would be true, if you want to use the larger tows in these figures, but you are talking about 1945 there, and you have been just describing and brought in the 1950 tows, and they can use the waterway and can take 10,000 tons, or at least 9,800 tons through the canalized waterway.

Mr. DONNELLY. With the savings per ton that are shown here; is that correct?

Mr. FAISON. I understand—no, I do not know about the savings. I have not made that calculation; I do not have the difference for the economic movement, and it is claimed it is more economical than slow movement with ordinary equipment.

Mr. Chairman, that tow [indicating] makes no ripples; there is no turbulence; it does not create any waves. The tow referred to in the 1945 report was limited to, probably, 4.5 miles an hour. These tows can go through the canal at between 8 and 10 miles an hour.

They are better, the integrated tows; the boats are right up against each other, right up against the tow, so there is no backwash of the waves, and there is no water in front of the tow; there is no wave spreading out behind to damage the side of the canal, and they can go right through.

Mr. DONNELLY. I am glad you brought that up, Mr. Faison. The proposed Tennessee-Tombigbee waterway contains 10 locks, does it not?

Mr. FAISON. I think it contains more.

Mr. DONNELLY. It did originally, 18, but General Pick, I believe it has been reduced to 10?

General PICK. That is what we are working on now.

Mr. DONNELLY. Yes. The proposed waterway is some 170 feet wide from Demopolis, a distance of 220 miles up to the beginning of the Divide Cut; is that correct?

Mr. FAISON. Yes. Controlling width.

Mr. DONNELLY. And for a distance of 39 miles the Divide Cut channel width is only 150 feet, with channel passings of 200 feet spaced every 4 miles?

Mr. FAISON. A thousand feet.

Mr. DONNELLY. But only 200 feet wide, every 4 miles?

Mr. FAISON. Yes; it is a thousand feet long.

Mr. DONNELLY. Yes. If this long *Harry Truman*, 1,200 feet long, which you say operates without trouble on the waterway, gets to the Tombigbee, it cannot operate there, can it?

General PICK. Why not?

Mr. FAISON. I think we have got the Tombigbee tow adequate as of the time of the report. They would have tows of that kind.

Mr. DONNELLY. Now, Mr. Faison, in the figures of the tonnage that you have used, the tonnage you gave in justification of the Tombigbee ratio of economic benefits versus costs, you have predicated your figures, to a considerable degree, upon the diversion of river towboats from the Mississippi River to go back up north by the Tennessee-Tombigbee, have you not?

Mr. FAISON. Yes; standards of 1945, in both cases.

Mr. DONNELLY. If you have—well, the Corps of Engineers has told us here that the conclusion of the committee staff that new integrated tows is rapidly replacing the old style equipment must be taken as an exaggeration. And that statement is by the Corps of Engineers under date of April 23, 1951.

Mr. FAISON. If you will read on——

Mr. DONNELLY. I have read that paragraph.

Mr. FAISON. Yes.

Mr. DONNELLY. Now if the old style 1,200 horsepower, eight-barge tow gets on the Tombigbee and goes through the locks, the articulated tow cannot pass, can it?

General PICK. Why?

Mr. DONNELLY. It is like an automobile trying to pass a truck in hilly country; when you go up the hill you cannot pass the truck because you are afraid someone is coming up the hill on the opposite side; and when you get to the top of the hill the truck goes downhill faster than the automobile.

General PICK. You understand, Mr. Counsel, that it is customary for traffic to be regulated in waterways as well as traffic on highways. The boat traffic is reduced by ships in passing. If you mean that this integrated tow was operating in a canal, and would go to pass an on-coming tow at a high rate of speed, and that would damage the tow it was passing, then regulations would be established to require reducing the passing speed during passing. You understand that, do you not?

Mr. DONNELLY. I understand that; yes. The point is——

General PICK. What point are you trying to develop?

Mr. DONNELLY. The integrated tow has 3,600 horsepower; it comes down the Mississippi with 3,600 horsepower. And when it goes back up the proposed Tennessee-Tombigbee it still operates with 3,600 horsepower as against the 1,200 horsepower tows on the Tennessee-Tombigbee. The savings are based on speed of movements, and you would have a Cadillac or a Packard or a Chrysler being held back by a much slower automobile.

General PICK. We are not; that is not of great importance as you would indicate to the committee. You must remember that boats do not come down the canal like streetcars on main street. There are not too many on the waterway. Now, Butcher-Arthur's tow does not use 3,600-horsepower towboats. It is only this experimental towboat, and the barge make-up that is in the inland waterway is an experiment. That is what I have tried to bring out, that it is a Government organization experimenting with that tow. I think this has been referred to, counsel pointed out yesterday; a lot of money has been put on this. The tow has many bad features that have not been worked out.

Mr. RABAUT. You are referring to the *Truman* tow?

General PICK. Yes. For instance, the tow will jackknife, and when it jackknifes you are sunk. Colonel Potter, I think you were district engineer when that happened one time?

Colonel POTTER. Yes.

General PICK. You were going downstream and when the first part got around the bend, the darn thing jackknifed. How many barges did you lose?

Colonel POTTER. Well, the whole tow split up. And, the point I was trying to bring out before is that the *Harry Truman* is an experimental tow and makes for a lot of thinking in the future. It is not the integrated tow that Butcher is talking about.

Mr. RABAUT. No.

Colonel POTTER. And point No. 1: The bottom width of the Intracoastal Canal is how many feet, Mr. Faison?

Mr. FAISON. One hundred and twenty-five feet.

Colonel POTTER. One hundred and twenty-five feet, the bottom width of 125 feet as against 170 in this canal; they haul 30 million tons of traffic, two-way traffic operates on that Intracoastal Canal in tow barges.

Mr. DONNELLY. I think this might be of some interest concerning the Federal Barge Lines integrated tow, the *Harry S. Truman*. I am quoting from the first sentence. It is entitled "What is it"?

The integrated tow is a streamlined vessel for the transportation of freight on the Mississippi River system.

So it is not intended at all for the Tennessee-Tombigbee system.

General PICK. It is an experimental piece of equipment, and it will work on the canalized waterway, but your question, if you come up with a tow of 1,000 feet you cannot get that tow through a 600-foot lock, you have got to break it. Now if they want to reduce the length of it to a canal which would fit the lock, they could go through just like any other locks, and it would pass each other in a waterway of 170 feet.

Mr. DONNELLY. In other words, the term "Mississippi River system" encompasses the Mississippi, the upper Mississippi above Cairo, and the Ohio River. Now the proposal before us——

General PICK. The same length of locks on the Ohio River.

Mr. DONNELLY. Or on the Tombigbee.

General PICK. Or the Tombigbee.

Mr. DONNELLY. The proposal before this committee is in effect to make the proposed Tombigbee waterway a part of the Mississippi system, because when they bring the barges downstream on the Mississippi to New Orleans, they would divert to Mobile to go back upstream. That is the relevance of the Federal Barge Line announcement here, and it is the relevance of Butcher-Arthur, who has standardized on the 5,000-ton class of tow units, and all these savings you see here in table 18 of the Corps of Engineers are predicated upon 3,500 tons.

General PICK. Mr. Donnelly, the 5,000-ton tow would work just as well on the Tombigbee as the 3,500-ton tow. There is no difference in it.

Mr. DONNELLY. Depending upon whether double locking is required.

General PICK. I am telling you the only time you will have to double lock is when you come up there with a tow that exceeds 600 feet. That is all it is.

Mr. KERR. We will take a short recess.

(Short recess taken.)

Mr. RABAUT. The committee will be in order.

POPULATION OF WAY PORTS

Mr. DONNELLY. At this point in the record I would like to insert the figures of the United States Census Bureau with respect to the population of the way cities. I have here the figures from the United States Census Bureau. The committee will recall when I read from the general's report there was mention made of way ports, the breaking of tows to take care of way ports.

On the Mississippi system we have New Orleans with a population of 567,257, 1950 census. We go up to Baton Rouge, 34,917. We go up to Natchez, which is not shown here on the map, 15,000. We go up to Vicksburg, which is shown here, 24,000, in round numbers. We go to Greenville, Miss.—perhaps I should give each committee member a copy of these figures, because the comparison is quite significant. I am sure that you gentlemen will want to note the very small population of the few towns in Mississippi that would benefit from this project.

We get up to Greenville, 20,000, in round figures. We go up to Helena, Ark., which is a key port because bauxite from the Jones mill plant of one of the aluminum companies at one time or another has been said to have used the port for bauxite. It has a population of 8,000. We get to Memphis, 394,012 at the 1950 census. If the members will look at the column on the right-hand side they will see the population of the way ports on the proposed waterway—Mobile, 1950, 127,151. Demopolis, round figures, 4,000 people. Columbus, Miss., round figures, 13,000. Aberdeen, Miss., which is not shown on this map, round figures, 4,000. Amory, Miss., which is not shown on the map, but which is on the east fork of the Tombigbee, round figures, 3,000. Then you get to Paducah, round figures, 33,000. The last group of figures, outside of Mobile, is from the 1940 census, because the towns are so small that the 1950 census population figures are not in, so recapitulating, based upon the figures, the way ports on the Mississippi River total in population 905,947, and on the proposed Tennessee-Tombigbee route, way ports, 138,746.

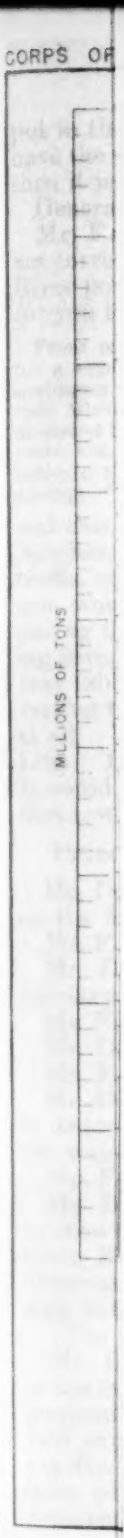
Those way ports on the Mississippi will be deprived of the service upstream, if these barges are diverted at New Orleans over at Mobile and back up the Tombigbee waterway.

Mr. RABAUT. Now, is it your idea that this whole Tombigbee system is proposed because of these cities?

Mr. DONNELLY. That is one of the factors. In the first place, the cities on the proposed Tombigbee route that I have named are not the source of the commodities which would require barge service on an inland waterway as distinguished from Birmingham, Ala. You see, Birmingham has a port. It is an important steel center. They have use for a waterway, but none of these towns over here [indicating] have any kind of industry whatever which would justify the spending of these hundreds of millions of dollars.

Mr. RABAUT. The slack waterway of the Tombigbee, it has always been proposed to us, that would be used because of the relief in fighting the current of the Mississippi, not so much as for what it would do locally, except that there was some talk of a big development that would come along there. I just want to say that in fairness to the proposals that have always been put before the committee.

Mr. DONNELLY. It may be a canalized slack water system, but the rate the barges may move up here, shown by the figures that I have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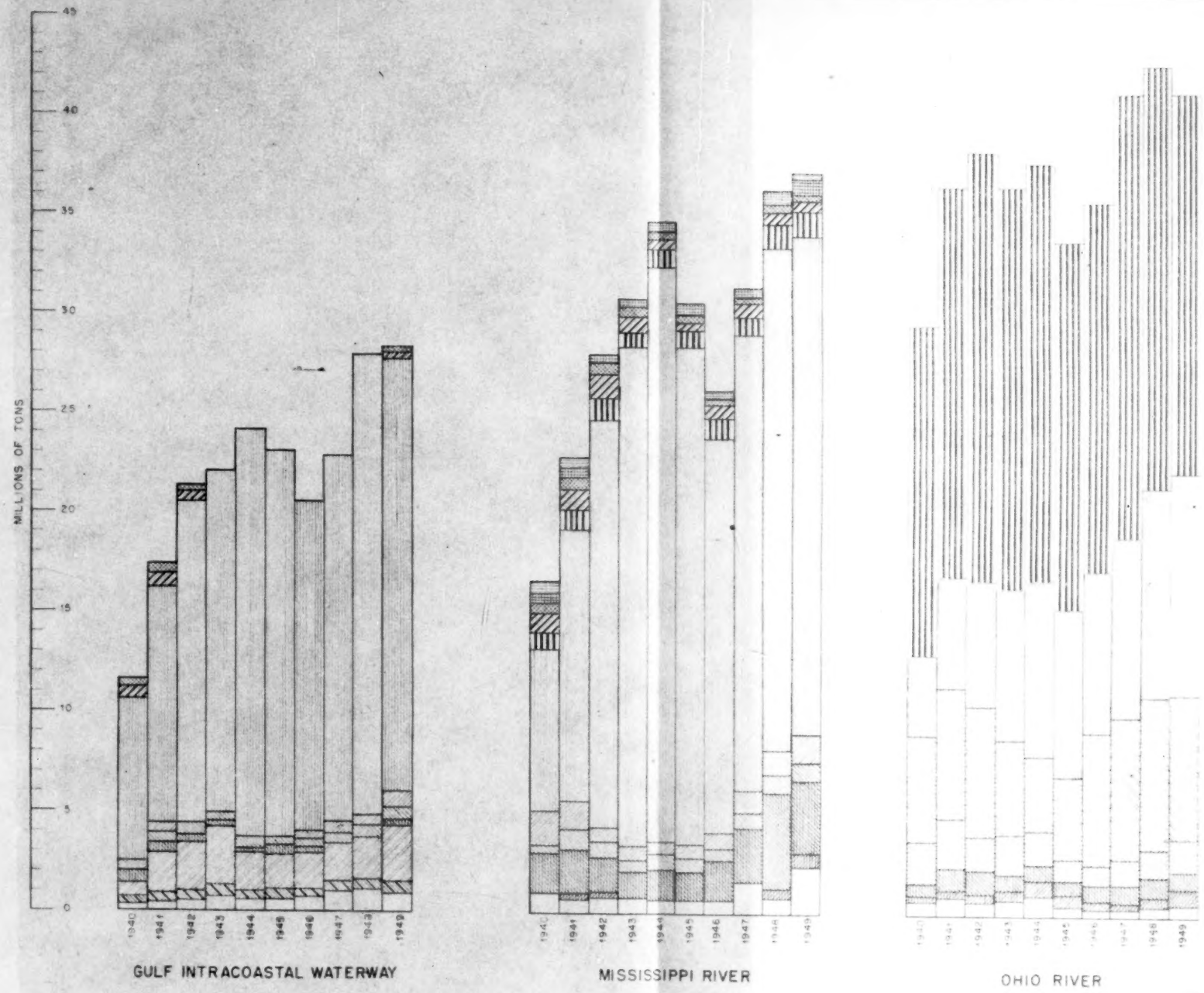
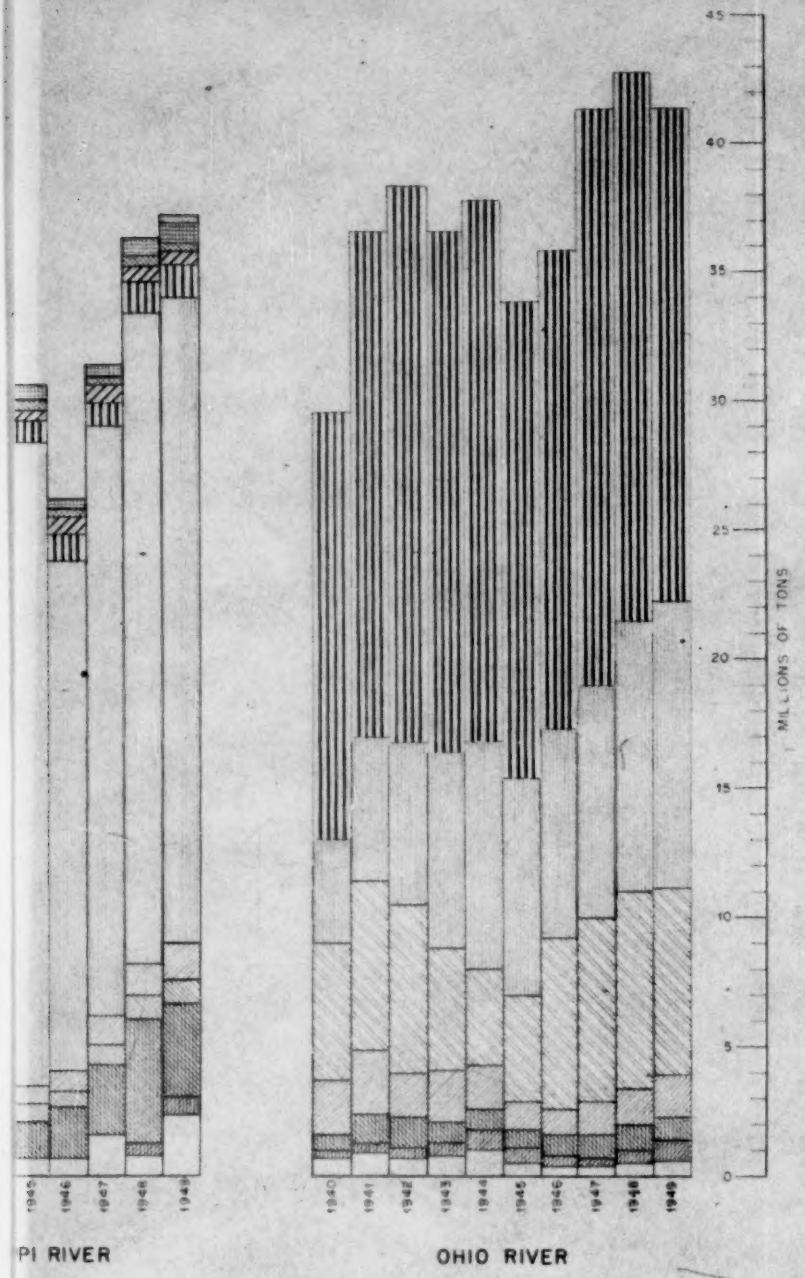


COMPARISON OF INTERNAL WATERBORNE COMMERCE



WATERBORNE COMMERCE

GULF INTRACOASTAL WATERWAY

LEGEND	CARGO COMMODITIES IN THOUSANDS OF TONS									
	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
roducts, n o s	447	425	303							300
products and paper	631	688	447							300
um and products	8,024	11,803	16,158	17,103	20,389	19,322	16,448	18,328	23,052	21,696
teel and other metals	528	507					345	539	538	816
		487	537	387	507	417	425	483	581	516
nd non-metallic minerals, n o s	597	498	390	351	316	415	332			365
mal shells	686	2,026	2,392	2,943	1,894	1,797	1,789	1,922	2,081	2,772
ne and shale	423	543	540	522	359	488	440	539	480	630
er commodities	307	374	501	739	620	606	678	990	1,134	896
Total	11,643	17,351	21,268	22,045	24,085	23,045	20,457	22,801	27,866	28,291

MISSISSIPPI RIVER (INTERNAL TRAFFIC ONLY)

LEGEND	CARGO COMMODITIES IN THOUSANDS OF TONS									
	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
sirup and molasses	552	547								300
	510	467	378	415	516	536	387	528	674	600
roducts, n o s	503	623	663	476	363	377	335	302	397	300
products and paper	1,000	972	1,145	851	523	455	680	728	685	521
and coke	756	995	1,121	698	893	837	1,011	907	1,178	1,221
um and products	6,137	13,591	20,401	24,964	28,744	24,893	19,675	22,780	25,175	25,106
teel and other metals	1,705	1,401	664	653	638	636	806	1,124	1,195	1,393
	441	1,026	845	611	846	706	626	778	915	856
and non-metallic minerals, n o s	1,953	2,200	1,722	1,314	1,454	1,445	2,000	2,665	4,940	3,622
als and products		318	327						411	707
her commodities	1,009	681	774	835	731	697	674	1,611	770	2,406
Total	16,566	22,821	28,040	30,817	34,708	30,582	26,194	31,423	36,340	37,232

OHIO RIVER

LEGEND	CARGO COMMODITIES IN THOUSANDS OF TONS									
	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
and coke	16,566	19,510	21,514	20,201	21,015	18,458	18,519	22,411	21,330	19,100
um and products	3,997	5,594	6,255	7,625	8,788	8,370	8,082	8,919	10,444	11,083
and gravel	5,258	6,513	6,549	4,669	3,723	4,097	6,640	7,158	7,624	7,176
teel and other metals	2,114	2,582	1,651	2,012	1,676	1,101	965	1,287	1,382	1,608
and non-metallic minerals, n o s	609	1,090	1,177	804	792	704	823	922	962	947
als and products	310	367	426	467	780	655	441	344	549	782
her commodities	695	901	709	832	1,027	483	381	356	501	604
Total	29,549	36,557	38,281	36,610	37,801	33,868	35,851	41,397	42,792	41,300

MISSISSIPPI VALLEY AND
GULF COAST REGIONAL STATISTICAL OFFICE

INTERNAL WATERBORNE COMMERCE

SCALES AS SHOWN

OFFICE OF THE DIVISION ENGINEER
LOWER MISSISSIPPI VALLEY DIVISION
VICKSBURG, MISS.
AUGUST 1950

DRAWN	TRACED	CHECKED
W.C.D.	W.C.B.	L.M.G.

File No. H-2-17728

put in the record, is 1.8 against upstream Mississippi 2.5, but if you have the power in your modern river equipment to go back upstream, then it is not economical to come over here on the Tombigbee.

General PICK. Mr. Faison would like to speak.

Mr. FAISON. I feel that you want me to correct a statement that is not correct that the counsel makes. He just said that the Mississippi River ports would be deprived of the upstream traffic. I would like for you to permit me to read a short paragraph from the report:

> From parallel studies of commodity statistics and logs of towboat masters for a consecutive period of years, appropriate values were assigned to the avoidance of the retarding currents in typical water-carrier operations on the open Mississippi River between New Orleans and Cairo, and the portion of the up-bound traffic that could probably be shunted to the proposed canalized return route via the Tombigbee was determined. Statistics for the past 12 years indicate that the growth of nondivertible upstream traffic on the lower Mississippi * * *—

and that is all the traffic that the Mississippi River needs, Memphis, Natchez, to remain just as it is. There is no thought of diverting that traffic, or depriving those people of their upstream traffic. The diversion would scarcely have kept pace with the growth of local traffic during these 12 years if we had diverted all we talked about diverting here. This traffic on the Mississippi River, according to these 12-year tables, would still have grown in addition to that. We are diverting the through traffic that does not serve that stretch of the river at all. We do not intend to disturb the service of the Federal Barge Line. The Federal Barge Line does not operate on the Ohio River. It could not operate that tow on the Ohio. It never has operated that tow on any canalized water.

PETROLEUM MAKES UP BULK OF WATER TRAFFIC ON MISSISSIPPI

Mr. DONNELLY. Is it not a fact that the bulk of the through traffic on the Mississippi River consists of petroleum?

Mr. FAISON. That is right.

Mr. DONNELLY. Is it not also a fact that petroleum is moved in industry-owned barges; that is, barges owned by the oil companies?

Mr. FAISON. I think that is correct.

Mr. DONNELLY. Is it?

Mr. FAISON. Not all, but some.

Mr. DONNELLY. Is it not a fact that your files show that your office is aware that the petroleum industry, if it were to get a saving on the waterway, does not pass that saving along to the public?

Mr. FAISON. I do not agree with that at all.

Mr. DONNELLY. I will get the file out. I would like at this time to show the members of the committee a chart prepared by the Gulf Coast Regional Statistical Office of the Corps of Engineers, entitled "Internal Waterborne Commerce." I would like to show this, if I may, to the members of the committee.

(The chart is herewith inserted.)

Mr. DONNELLY. This shows just who stands to pocket the money in the event this project is voted. Here is the Mississippi River. The predominance of the tonnage is the petroleum tonnage. If you will look at the Gulf Intracoastal Waterway, you get the same situation exactly. If you look at the Ohio you get predominantly coal and coke, which is the heavy black vertical line, and this [indicating] is petroleum here.

Integrated Tow of Federal Barge Lines Does Not Operate on the Ohio River

Mr. Ford. Just previous to your last comment, Mr. Faison made a statement that ties in with what I pointed out a few moments ago to you in regard to that Federal Barge Line announcement. I read the statement which in effect said that the new *Harry S. Truman* barge, the tow, was for the Mississippi system. You commented that the Mississippi system took in the Ohio, where they had similar locks and dams as are proposed on the Tennessee-Tombigbee.

Mr. Donnelly. That is correct.

Mr. Ford. The inference being, though I do not think you said it, that the *Harry S. Truman* could go, and did go, up the Ohio River where those locks and dams are. Mr. Faison just said that the *Harry S. Truman*, operated by the Federal Barge Line, does not operate on the Ohio River. Is that true or not?

Mr. Faison. It does not operate on the Ohio River.

Mr. Ford. The *Harry S. Truman* is a tow and barge which is not contemplated to be operated on the Tennessee-Tombigbee, so that information from the Federal Barge Line may be to some extent irrelevant.

Mr. Donnelly. I would have to verify Mr. Faison's statement from our own economists.

The staff of the committee has for a year been analyzing the reasoning and conclusions reached by Mr. Faison, and in turn by the Chief of Engineers, and we have found, and we have submitted to the committee in the staff report, a tremendous number of discrepancies between the statements therein and the actual facts. The staff of the committee has sent investigators out into the field. We have sent engineers and investigators as well down to the area of this project and did learn, and have reported to the committee, that much of the representations made by the Chief of Engineers with respect to this project are not borne out when close investigation is made of them.

Mr. Ford. Let me suggest this: I think it is a relatively simple matter to find out whether the *Harry S. Truman* operates on the Ohio or not.

Mr. McGrath. I think that you will find that the statute prohibits it from doing so. Is that not so?

General Pick. I think so.

Mr. Rabaut. The question is, Could it operate on the Ohio?

General Pick. However, it is not prohibited from operating on the upper Mississippi.

Mr. McGrath. I did not say that. I said on the Ohio.

General Pick. You are correct.

Mr. Rabaut. Could it operate on the Ohio?

General Pick. It could operate on the Ohio if they wanted to adopt the length of the tow——

Mr. Faison. You cannot do that. They might do it if they could use smaller integrated tows.

General Pick. They could take the same principle and cut it down and get a tow that would get in the locks, and it would work on any canalized waterway where you did not make the tow longer than your lock chambers.

Mr. DONNELLY. The basic statement before the committee is a statement of the Corps of Engineers, page 3, paragraph 7, criticizing the staff of the committee. It says:

> The statement that "high-speed integrated equipment" which cannot be adapted to standard lock sizes, is rapidly replacing "old style" equipment must be taken as an exaggeration.

General PICK. That is right.

Mr. DONNELLY. The staff of the committee in its report has informed the committee that it has interviewed the barge operators in 1950. They sent an engineer down there, and the barge operators are in a period of transition in just this thing—high-speed integrated equipment, as epitomized in the Butcher-Arthur tows.

General PICK. I can show you that they are on their way back to the normal equipment that is being used to haul 98 percent of the tonnage that is being hauled on the inland waterway under the regular standard type of equipment.

Mr. FORD. For my own information, I do think it is somewhat relevant that we get from the Federal Barge Lines a statement whether or not they can operate on the Ohio by law, and if they are not prohibited by law, can they operate from a purely practical matter of operation, and also on the Missouri, and whether it is feasible for them to do so.

General PICK. Also on the upper Mississippi.

Mr. FORD. I meant the upper Mississippi. Let us find out where the *Harry S. Truman* operates.

(The information requested was furnished by the Federal Barge Lines, and is as follows:)

INLAND WATERWAYS CORPORATION,
Washington 25, D. C., August 23, 1951.

Mr. H. F. PETERS,
House Appropriations Committee,
Old House Office Building, Washington, D. C.

DEAR MR. PETERS: Confirming our telephone conversation this morning, the Inland Waterways Corporation operates a common carrier water service on the Mississippi River and its tributaries, the Illinois and Missouri Rivers; also on the Warrior River and certain of its tributaries.

Under Statute United States Code, title 49, chapter 5, section 153 (b) it is not authorized to operate on the Ohio River. The Corporation has conducted a seasonal operation on the Missouri River for the past 15 years. The service has been somewhat irregular and costly due to the delay in the construction of a 9-foot channel to Sioux City, Iowa.

Very sincerely yours,

SOUTH TRIMBLE, JR., *Chairman, Advisory Board.*

Mr. DONNELLY. Let me ask General Pick this question which is suggested by one of the Congressmen. The savings shown in table 18, page 147, of the hearing book, which the general has in front of him right now are predicated, are they not, on a 3,500-ton tow with a 1,000 or 1,200 horsepower towboat pulling eight barges?

Mr. FAISON. I would like to ask the counsel to understand what a 3,500-ton means and what a 55-percent load factor means. It means a tow that can carry from 6,000 to 6,400 tons. The load factor we find prevailing on these rivers in that kind of traffic is about 55 percent. It goes full up and practically empty back, or up half loaded and back half loaded. And that statement is made in the report itself, that we are using the 55-percent load factor.

Colonel POTTER. All railroad cars in the country are a gage of 4 feet 8½ inches. They are on that gage because tracks are that wide all over the country. Any barge line operator who intends to go into business and make a profit must design his equipment to utilize the facilities of the inland waterways of the United States. If the locks that he intends to operate are 110 feet wide and 600 feet long, he must, to make a profit, form a tow which can utilize that equipment. If he intends to use a waterway where the chambers are 75 by 450, he will design and operate his tows for that distance. No barge-line operator will build a tow for general cargo purposes which cannot use a lock of the type that the United States Government builds.

I would like to add one more thing, not in the interest of being contentious, but merely to bring out the facts. Counsel read a list of the population of cities. He started out with New Orleans, and then he came to Baton Rouge with 34,000. Baton Rouge is the site of the biggest oil refinery in the world. It is a deep-seaport. Its population is not a measure of the transportation, water-wise, that operates into that port. And while some towns have a population that is definitely measured by the amount of river traffic, such as some of our smaller coastal ports, a population of a town on our inland waterways may be gaged entirely by farming or manufacturing or other purposes. The fact that 34,000 people are able to operate one of our largest ports, both inland and sea water-wise, I think is important. It does not serve as a measure of the size of the traffic thereof.

Mr. DONNELLY. I asked Mr. Faison a question that he has not answered. Colonel Potter has injected a new thought. Baton Rouge is a seaport and is a center of tremendous operations. The reason that I read the population of the small towns from Demopolis on up is because there is no industry in those towns, as I stated, that would initiate commodities to move on barge lines.

ENGINEERS' COMPUTATIONS ARE BASED ON A 3,500-TON TOW

Now, Mr. Faison, will you answer the question: Is it not a fact that table 18 and table 19 on page 147 of the hearing book are based on a 3,500-ton tow with 8 barges, and will be of 1,200 or 1,000 horsepower?

Mr. FAISON. At a 55-percent load factor; yes.

Mr. DONNELLY. That is right, sir.

Now, I will read to the committee an excerpt from an interview secured by Engineer Schulte of the Corps of Engineers when he went down to New Orleans and to Mobile. We have a statement of Mr. A. M. Myer, president of the Myer Towing Co., Inc., Pensacola, Fla. Mr. Myer says:

> The gentleman states—
>
> and the gentleman is Mr. Myer—
>
> that there is, however, one angle that will decrease the economy of using river-type towboats. He has reference to the fact that most river towboats handle seven to nine barges and consequently must be very powerful and navigate the current, etc. (about 1,200 or 2,000 horsepower). This horsepower could not be fully utilized on the sound for the reason that only four or five barges can be handled on a hawser at one time across the sound. He states that the average tow across the sound is not more than three barges, and this could not be measurably increased. The gentleman stated that in his opinion there were a good many days when a river-type towboat could tow on a pusher type hook-up and that occasionally the tugs tow up in this manner.

Width of Proposed Waterway

Now, General Pick, if I may ask you a question, sir, the proposed Tombigbee waterway from Demopolis, a distance of 221 miles upstream, to the beginning of the divide cut, according to the plan of the Corps of Engineers, envisages a channel width of 170 feet.

General Pick. That is correct.

Mr. Donnelly. And in the divide cut of 39 miles from Mackeys Creek to Yellow Creek, the channel width is 150 feet.

General Pick. That is correct.

Mr. Donnelly. And in the divide cut, every 4 miles, there will be passing places 200 feet wide and a thousand feet long?

General Pick. That is correct.

Mr. Donnelly. So that the tows can pass each other.

General Pick. That is the proposal.

Mr. Donnelly. The staff of the committee pointed out to the committee in this report that the Corps of Engineers has under consideration, not a width of 170 feet and 150 feet, but 300 feet for the channel, and the staff recommended to this committee in its report that the Corps of Engineers, having given figures of $179,000,000, based upon 170-foot width and 150-foot width, give the committee the figures on a 300-foot width channel before the committee acted on the construction funds.

The Corps of Engineers on April 23, 1951, in its written answer to the staff report says this, and this is on page 3, paragraph 13:

> In this conclusion by the investigating staff the Corps of Engineers is criticized for not submitting an estimate of cost for constructing the waterway with a 300-foot channel throughout. It is inferred that the Corps has specific plans for developing a 300-foot waterway, and is misleading the Congress by presenting cost estimates based on a 170-foot waterway (150 foot in Divide section). The Corps of Engineers has not recommended a 300-foot waterway and would never so recommend unless there develops sufficient traffic to justify the cost of increasing the channel dimensions. The Tennessee-Tombigbee waterway is authorized for a width of 170 feet. To increase this width to 300 feet would require additional authorizing legislation by the Congress.

General Pick. What question do you want me to answer?

Mr. Donnelly. I have not asked you a question. I wanted to read the basis for it before I asked a question.

The waterway as proposed by the Corps of Engineers at this time is a one-way waterway running in a northerly direction from Demopolis up the Tennessee River, is it not?

General Pick. No, sir; it is a two-way waterway.

Mr. Donnelly. Now, I have here, General Pick, a report of September 8, 1946, Corps of Engineers, United States Army, office of the district engineer, Nashville district: "Minutes of meeting of Site Selection Board, Tennessee-Tombigbee."

There were present from your office three representatives, South Atlantic district, two; Mobile district, four; Ohio River district office, three; and the Nashville district office, nine. I find on page 4, paragraph 8, "Channel dimensions".

> Channel dimensions were discussed. Mr. Stuck recommended a memorandum by Mr. Harold on this subject which appears as Appendix A. It was agreed that the structure, including bridges, excepting locks, will be designed and hydraulics completed for the ultimate two-way navigation which is expected to have a bottom width of 300 feet. Construction at present is to be for initial one-way navigation with passing places at about 4-mile intervals. Minimum

bottom widths and depths will be as contained in the Rivers and Harbors Report, House Document No. 486, except the passing places shall have a minimum bottom width of 240 feet and be provided throughout the full length of the waterway. For the river section, the cross-sectional area of the channel shall be at least three times the submerged area of the tow except for the lateral snake-bend cut. Extra widening will be required in bends for the new tow size, and will be in accordance with the formula given in appendix II, 1938 report.

Do we understand from what I have just read that the Corps of Engineers contemplates the ultimate width of the channel of the waterway to be 300 feet?

General PICK. Mr. Chairman, this is a very long and involved question. The first point that I would like to cover here is that if the waterway is to be increased to 300 feet, it would require a resurvey and another report to be submitted to the Congress for the authorization. In the building of the Intracosatal Canal, with which I had a lot to do in Louisiana, from New Orleans to the Sabine River, we built that canal 9 feet deep with a 100-foot bottom width. It had not been completed but a very short time before it was enlarged to 125-foot bottom width and 12 feet deep. Over the years that the Corps of Engineers has been in the waterway business, we have found by actual experience many things that we must look out for. In this country there is development going on all the time—highways, railroad bridges, and so forth are crossing these waterways. We have to look ahead. We have to look ahead because a waterway established like that could be in business for many, many years.

In the law authorizing this project, the Tennessee-Tombigbee, it is specifically stated that the local interests will build highway bridges. It is covered in law that the Government will build the railroad bridges.

Our experience, and our experience in working with the Congress, has shown us definitely when we develop a new waterway we must look to the long-time development. Therefore, if we were to consider and we were to build the Tennessee-Tombigbee waterway, one of the things we would have to do would be to set up criteria for the State Highway Department and we would not agree to them building a bridge across that waterway that would prevent its further development within reason.

Now, if we decided that would be 300 feet, we would say, You put a span across this waterway that will allow this waterway to be developed to that width. If we designed and built a railroad bridge across there at Government cost we would provide an opening there that would allow the waterway to be enlarged.

In other words, suppose in the history of the Intracoastal Canal from New Orleans, to Corpus Christi, Tex., we had to foresee these things and keep highway and railway bridges with sufficient spans to allow for this to be enlarged.

Now, the Intracoastal Canal has been built and rebuilt since 1927, when I started the survey from New Orleans to the Sabine River, so in this waterway here, we would not permit bridges to be built without having sufficient span to allow this waterway to be further developed. There has been no thought given to building this waterway to 300 feet. There has been no request from the Congress to survey the waterway and produce a report for the Congress on a 300-foot waterway, nor will the Corps of Engineers take any such steps without a directive from the Congress.

If that waterway is to be enlarged, I would hold immediately that we would require additional legislation. These meetings that we have, the meetings of the engineers to study these problems and work up designs, must go not only into the problems at hand, but the long-range viewpoint of these waterways because there is not the waterway I know of in the United States that has not been enlarged as time goes on.

We must look ahead. It would be very short-sighted if the Corps of Engineers were to build a railroad bridge across the Tennessee-Tombigbee and then, like in the case of the Intracoastal Canal, 4 or 5 years later come to Congress with a report wanting to enlarge it.

One of the items in there would be that we would have to rebuild that bridge. We would receive, and it would be just, severe criticism. So, in planning these waterways you have to look to the future.

But, to answer your question directly, we have no plans afoot to develop that waterway to a 300-foot width.

NOTE.—In the report on the Gainesville lock (the first lock on the proposed waterway above Demopolis) which was, according to earlier testimony in these hearings, approved by the Chief of Engineers on December 19, 1947, the following appears with respect to the ultimate 300-foot width of the waterway:

"Ultimate Channel (minimum bottom width, 300 feet):

Site B:	
Rectification of river channel and excavation for lock approaches, 7,113,000 cubic yards at $1	$7,113,000
Lock excavation, 804,000 cubic yards at 75 cents	603,000
Lock cofferdam	275,000
Bridge over Tombigbee River, Highway No. 39	500,000
Total	8,491,000
Site C:	
Cut-off channel and lock approaches, 2,907,000 cubic yards at 25 cents	726,750
Lock excavation, 999,000 cubic yards at 60 cents	599,400
Bridge over lock, Highway No. 39	220,000
Lock cofferdam (includes cofferdike and pumping only)	75,000
Total	1,621,150
Difference in cost	6,869,850
Saving by reduction of distance	900,000
Total savings, site C over site B	7,769,850

"11. High-water profiles of various floods for present conditions and for the initial 170-foot-channel improvement with Demopolis lock and dam, Rattlesnake Bend cut-off, and Gainesville lock and dam in operation have been determined by detailed backwater computations. These computations show that the initial development will have no effect on high stages at the Gainesville gage. Since the construction of the ultimate 300-foot channel would lower such stage, any wall elevations set to satisfy the conditions for the initial improvement will be satisfactory for the ultimate plan."

Mr. DONNELLY. Now, General, a little while ago I asked you the question on as to whether the proposal before this committee, the 170-foot channel and the canal, and a 150-foot channel width in the divide cut, contemplated one-way or two-way navigation. You assured me in your answer that it contemplated two-way navigation. May I point out to you from this report, from which I just read paragraph 8, that it was agreed that structures, including bridges, except at locks, will be designed in hydraulics computed for the ultimate two-way navigation which is expected to have a bottom width of 300 feet.

Now, General, do we understand that in order to have two-way navigation, you must have ultimately 300 feet, or can we have two-way navigation with the proposal before the committee of 170 and 150 feet?

General PICK. You can have two-way navigation without difficulty with 170 feet. The canal carrying the largest tonnage in the United States today is the Intracoastal Canal in Louisiana and Texas. I think that it is somewhere now about 27 million or 28 million tons a year. I have just told you that is a waterway 125 feet wide and 12 feet deep. Certainly you could operate two ways on a 150-foot canal.

Mr. DONNELLY. Then I take it, General, that you would differ from the statement made here?

General PICK. I just got through explaining to you what that statement means. That statement means we do not want to go back to the State of Mississippi, or Alabama, again in a few years and say, "We built your bridges here because we did not see far enough ahead to tell you to make this navigation span wide enough to get these boats through." No widening in the canal would ever be undertaken unless the request came from the shippers that the traffic was such that it would require a deeper and wider waterway.

OPPOSITION OF THE BARGE OPERATORS

Mr. DONNELLY. May I ask you this: How do you account for the fact that Mr. Faison has emphasized that on the basis of the survey by Engineer Schulte, he has concluded that the barge operators themselves are against the proposed Tennessee-Tombigbee waterway?

General PICK. Well, Mr. Donnelly, some of them are and some are not.

Mr. DONNELLY. I do not think the chairman can hear you. He wants to hear you, I am sure.

General PICK. I do not know why the operators are opposed to it, but I imagine they have their business well established now in one direction and another, and they would not like to have somebody coming through there with some better equipment that would come along and pick up some of their business. I suppose that is it. I do not know the answer to it.

DOUBT IN THE CORPS OF ENGINEERS AS TO THE ECONOMIC JUSTIFICATION OF THE PROJECT

Mr. DONNELLY. Since these hearings were recessed this morning, I think that I should bring to the attention of the committee the doubt that persisted throughout the Corps of Engineers in 1945 when House Document No. 486 was written.

General Schley, in 1939, said to the Congress in the earlier House document—and General Schley's report is contained in here, February 27, 1939—that he felt that the Tennessee-Tombigbee waterway could not be justified unless intangible elements were taken into consideration, and he concluded with this statement:

> They are difficult to evaluate and appear to me to be questions falling within the realm of statesmanship to which the Congress can best assign the proper value.

Now, in 1945, when the Corps of Engineers, pursuant to a resolution of the Committee on Rivers and Harbors, resurveyed this project

and considered General Schley's report, they recommended the Tombigbee waterway affirmatively, and without equivocation, and state in the report in the 1946 hearings, at page 125, that the benefit cost ratio would be 1.05 to 1.

I want to invite the attention of the members of the committee to the extreme doubt prevailing in the minds of the engineers 1 month—not 1 month, 19 days—before the 1945 House Document 486 was written, and I have here a memorandum for the members of the Board, from the files of the Rivers and Harbors Board of the Corps of Engineers. It is written on August 18, 1945, for the meeting of September 10, 1945, and the concluding paragraph is the pertinent one here, and I quote:

> The Tombigbee-Tennessee connection is essentially a long-range project having only secondary local importance and the extent to which it would be utilized is conjectural. It depends on overcoming the inertia of established business enterprises and water transportation agencies; on the vision of regulatory agencies engaged in public convenience and necessity; and on the effectiveness of the measures that will be taken by existing overland carriers to stifle potential competition from the waterway. The project has repeatedly been advocated before Congress and the adequacy of the plans and the soundness of the economics in previous reports have been vigorously assailed by opponents. The present report will doubtless undergo keen and critical analysis. In the preparation of the report the preliminary computations oscillated between favorable and unfavorable and the final benefit-cost ratio is close to unity.

Now, General Pick——

General PICK. Mr. Donnelly, what is the report you were reading from? What is it called?

Mr. DONNELLY. I identified it by quoting the heading, General. Has the information contained in that paragraph that I have just read been conveyed to the Congress in the 1945 report of the Chief of Engineers, or has it since been conveyed to the Congress by yourself or any of your predecessors in any official manner?

General PICK. I do not get the question. Will the reporter read the question, please?

(The question was read.)

General PICK. Mr. Chairman, I am unable to answer that question. This document which I have here, which counsel has quoted from, I notice is a memorandum for members of the Board. It is dated August 18 for the meeting of September 10. I do not know whether that was included in the report or not.

Mr. DONNELLY. I have carefully examined the report and no such statements are made in the report with respect to the contents of that paragraph.

General PICK. I presume this memorandum was made for the Rivers and Harbors Board.

Mr. FAISON. That is right.

General PICK. That Board has to consider these reports and render a report to the Chief of Engineers who in turn transmits to the Secretary of the Army and the Bureau of the Budget to the Congress. I do not know who wrote this. I do not know how——

Mr. DONNELLY. Who is X. H. P.? He was the gentleman who wrote that.

General PICK. I do not know. Do you know, Mr. Faison, who X. H. P. would be?

Mr. FAISON. I think Col. Xenophon Price.

General PICK. Xenophon Price, he thinks.

Mr. DONNELLY. What you have just stated is correct. I find that Lieutenant General Reybold, Chief of Engineers, stated in his letter of September 29, 1945, to the chairman, Committee on Rivers and Harbors, that he considered the report of that Board, the Board of Engineers for Rivers and Harbors—the Board you have just identified. His letter is contained in the 1945 House document which is here in the 1946 hearings at pages 124 and 125, so that the action of that Board was considered by Lieutenant General Reybold, who said:

I concur in the recommendations of the Board of Engineers for Rivers and Harbors.

And the question I asked you, and you indicated you did not know the answer, as I recall, is whether Congress was ever told officially, by Lieutenant General Reybold, or any other Chief of Engineers since he served, of the contents of that paragraph at the end of the report that I just read from.

General PICK. I do not think so. I do not know what Price's position was at the time. The Board is a legally constituted body. They consider all the evidence placed before them, and then that Board, acting as a board, recommends or disapproves reports sent before it. After carefully considering the information contained in the report and other data, and in many, many instances—I do not know whether it was done in this or not—but in most cases all important reports, when they consider it, they have either hearings in Washington here, or in the field, and they take testimony. After reviewing the report and all the information available, they render a decision. That decision is their own decision, and then they make their report of their decision to the Chief of Engineers. The Chief of Engineers can go along with their decision, or he can disagree with it. As to this document here, I feel certain that it was submitted to the Board, and I also am certain that the Board considered it when they considered this Tennessee-Tombigbee report.

There is no reason why this memorandum should have been submitted to the Congress any more than any other memorandum, or any other data that was considered in connection with the report. It was the report that they were considering, and that report was acted upon and forwarded to the Chief of Engineers, and Mr. Donnelly just read there that the Chief of Engineers concurred in the Board's report. Am I correct?

Mr. DONNELLY. You are absolutely correct, General Pick. Of course, the basic question here is not whether the memorandum was included in Lieutenant General Reybold's report in toto, but the question is whether the extreme doubt entertained by the Engineers themselves, as shown here in paragraph 10 that I have just read, whether the extreme doubt and the information of that extreme doubt was contained in the official report of Lieutenant General Reybold to the Congress which is printed as House Document 486.

Colonel POTTER. In order to clear up whether or not we do submit such things, I notice in the hearings that authorized this project that the letter of General Schley was included as a part of the public record, the thing that you read, Mr. Donnelly. I notice that the Chief of Engineers appointed a special board in addition to the normal survey by the district concerned after the investigation by the regular district and the consideration of the Board, the benefits coming out 1.05, and since the Congress had asked for the report, it

is the duty of the Chief of Engineers to submit those papers and the report recommending the project because it does have an economic ratio of above 1 to the committee of Congress concerned.

Furthermore, the Committee on Public Works does not take the Corps of Engineers as its only witness. I notice in the history of witnesses who appeared against this project very outstanding names who normally oppose our projects, in addition to other people who had the opportunity, and who did present quite voluminous testimony opposing this project. The wisdom of the Public Works Committee in evaluating the testimony presented was reflected in the authorization. Furthermore, due to people being entirely different, one from the other, our Board of Engineers includes what might be called "devil's advocates," who oppose actions, and the operation of the Board of Engineers for Rivers and Harbors is sometimes quite vicious in its testimony in its executive sessions. I am sure that the data that the counsel has presented received the consideration that it was due.

Mr. DONNELLY. Colonel Potter, I hope that you are not begging the question. I have read every word of the 1946 hearings held by the Committee on Rivers and Harbors which voted out the authorization act of July 24, 1946. No representatives of the Corps of Engineers in those hearings before the Committee on Rivers and Harbors expressed the extreme doubt which is shown here in the last paragraph, paragraph 10, that I read of this report, or memorandum to the Rivers and Harbors Board.

As I understand it, General Schley in 1939 indicated his extreme doubt for the project when he said that he would not affirmatively recommend the project because there were intangibles and that the position of the Congress was such that the problem fell into the realm of statesmanship. I point out in the 1945 report there is no statement that the Corps of Engineers themselves had such extreme doubt with respect to this project.

General PICK. Mr. Donnelly, once a report has been approved by the Board for Rivers and Harbors, and then concurred in by the Chief of Engineers, the action of the Corps of Engineers has been taken. The report goes up to the Committee on Public Works and at that hearing the proponents and the opponents come in and give all the testimony they care to give. It would not be proper, in my opinion, to have members of the Corps of Engineers come up after an action has been taken upon the report to further carry their case to the Congress. I do not believe that would be expected of us.

Mr. DONNELLY. That is the question that I have brought to the attention of the committee and I do not care to comment on it further.

ADDITIONAL INFORMATION FROM THE CORPS OF ENGINEERS

At this time, I would like to have General Chorpening tell us whether the other five documents, Nos. 2 through 6—and I will give him a copy of the list that was telephoned to him at Chairman Cannon's direction this morning—have been furnished to the committee.

General CHORPENING. The first document that you asked for has already been introduced this morning, the letter of memorandum of Mr. Faison to Mr. Bottoms.

Mr. DONNELLY. Correct, and I excluded that in the pending question.

General CHORPENING. The second and third documents, copy of the definite project reports for the Gainesville lock and dam and another document referred to as the Slichter file from which he testified yesterday, were given to Mr. Saunders, the clerk of the committee, this morning.

Mr. DONNELLY. Will you examine those papers to see if those were the documents furnished to the committee pursuant to the request 2 and 3 to which you referred?

General CHORPENING. That is correct.

Mr. DONNELLY. Let us put those in a separate file so there will not be any mistake about them. We will label those as items 2 and 3 of the committee's request this morning, and we will put them in a separate file.

General PICK. Mr. Donnelly, I would like to ask Mr. Slichter if those are the papers that you asked for this morning.

Mr. SLICHTER. Those are the papers that I delivered personally.

General PICK. What are they?

Mr. SLICHTER. They consist of a chain of correspondence between the various officers of the Corps of Engineers, starting with a letter from the district engineer at Mobile, presenting data on the design criteria for the Gainesville lock. They include the minutes of a meeting of December 8, 1947, summarizing the action of that meeting, and the information and the letter, and the action taken at the meeting, constitute the data required for the Chief Engineer for the definite project report on the Gainesville lock.

Mr. DONNELLY. Mr. Slichter, so there is no question now, we talked so much about definite project reports yesterday, request No. 2 on this list is "Copy of the definite project report for the Gainesville lock and dam." Would you identify that from the paper?

Mr. SLICHTER. I identify this as the information required by the Chief of Engineers and supplied to him—the requirements of the definite project report for the Gainesville lock.

Mr. DONNELLY. Do you identify any of those papers as the definite project report on the Gainesville lock and dam?

Mr. SLICHTER. We went to considerable length yesterday to discuss that the definite project report is one step of the Corps of Engineers in the designing of a project, and I went to considerable length to explain that the presentation of a formalized paper, marked "Definite Project Report," period, was not essential in designing a project; that the studies that go into that are the basis of the design, and this data developed those same studies and was accepted by the Corps of Engineers as the definite project report.

Mr. DONNELLY. Now, will you identify the documents which you say were accepted by the Corps of Engineers as the definite project report?

Mr. SLICHTER. On the Gainesville lock.

Mr. DONNELLY. On the Gainesville lock and dam.

Mr. SLICHTER. I identify them as the basic letter and its enclosures.

Mr. DONNELLY. This file will be kept and the reporter will please mark that "Definite project report for Gainesville lock and dam," produced by the Chief of Engineers on May 24, 1951.

Now, do you have a comment, Mr. Slichter?

Mr. SLICHTER. I say that I identify that as the definite project report, information required by the Chief, for the Gainesville lock and not the dam.

Mr. DONNELLY. Now, the request of the chairman of the committee is for "A copy of the definite project report for the Gainesville lock and dam."

Mr. SLICHTER. The definite project report for the Gainesville dam has not be completed.

Mr. DONNELLY. Now, will you give us the date of the completion of the definite project report for the Gainesville lock which is in that folder just marked by the reporter?

Mr. SLICHTER. The final action taken on the matter was that the conference in Washington, represented by a copy of the minutes in that file——

Mr. DONNELLY. And what is the date?

Mr. SLICHTER. December 8, 1947.

Mr. DONNELLY. Now, I have before me the justification sheet that Colonel Potter used yesterday to say that he had used, or some other officer had use, in testifying before a committee of the Congress either in 1950 or 1951. Let us have the reporter mark this as exhibit 1.

(The document was marked "Exhibit 1.")

Mr. DONNELLY. This exhibit No. 1 is already in the record.

Colonel Potter produced it yesterday for the purpose of telling the committee, and I have checked the record of transcript, that at the time that either he or some other officer was testifying, he had the accurate cost estimate based upon a definite project report for the Gainesville lock and dam.

I invite the committee's attention to the statement on this justification sheet which appears in the second column under the heading "Work in progress, or proposed for 1950—completion of definite project report on Gainesville lock and dam, $75,000."

Do you care to explain that, Colonel Potter, or will Mr. Slichter?

Colonel POTTER. I would like to explain that. I intended to bring it up at the end of the day in asking a question on procedure, and what my rights were under the provisions of being under oath. I have never testified before in these hearings under oath, and I think the committee is well aware of the fact that we get the minutes made by the reporter for correction, and in going over those minutes last night, it immediately became evident, in some cases to correct English and in other cases to correct meaning, it was necessary to change the record.

Do I have the right, I am asking, to make changes in a record that is made under oath? I am very much interested because I do not like to have any legal action become necessary against me. The specific question asked by counsel, I noticed, as I was going over that record, was that he used the words "lock and dam." Among navigation people, "lock and dam" is considered as one word, and usually we use the two together—a lock and dam. I so used that expression in saying the definite project report was ready. I should have said that the definite project report on the Gainesville lock was ready. It was a slip of the tongue that I said "lock and dam." I apologize for having made the statement. I am asking that I have the privilege of striking "the dam" from the testimony that I gave.

This $75,000 in the data sheet is for the definite project report on the dam, which is the second part of the construction.

Mr. DONNELLY. Colonel Potter, I believe that the explanation that you have made of the testimony of yourself, of yesterday, which you read last night, or since the recess yesterday, will clarify the matter for the record.

Colonel Potter. Do you have the right to change that on the record?

Mr. DONNELLY. As I understand, the official reporters certify to what their notes contain. As I understand you, you are saying that you had a slip of the tongue and you meant one thing instead of "lock and dam."

Colonel POTTER. You had used the words "lock and dam." It is one word in our language, and I used it, too, and I was wrong.

Mr. DONNELLY. Can we find out from the Corps of Engineers officially—we have gone at it now for several days—as to the status of the definite project report on, one, the Gainesville lock and dam, or two, the Gainesville lock, or, three, the Gainesville dam?

Colonel POTTER. You have been given papers by Mr. Slichter which pertain to the lock, and I think he has thoroughly explained it. There are no papers before this committee nor on hand before us, I believe, pertaining to the dam part of the structure.

STATUS OF PLANNING FOR GAINESVILLE LOCK AND DAM WHEN CORPS REQUESTED INITIAL CONSTRUCTION FUNDS

Mr. DONNELLY. There is a quorum present of four Congressmen. Let me ask this question categorically of the Corps of Engineers: Are the plans and specifications for a project prepared before the definite project report is prepared?

Colonel POTTER. The plans and specifications are a result of the definite project studies.

Mr. DONNELLY. Now, we have the testimony of General Pick before this subcommittee on April 3, 1951, a few weeks ago, and I will quote:

> General PICK. You have to determine what effects it will have. You will have to determine the land-acquisition problems. You have to determine what relocations will have to be made of highways, railroads, buildings, and the like. All of that goes into this definite project report in order to come up with as sound a figure as possible to determine the costs.

This was in response to a question by Congressman Rabaut. It continues:

> After doing all that, then we get some funds to start making up detailed plans and specifications, and we work those up. When that is done, we are ready to ask for construction funds.

Then Colonel Potter interjected at that point:

> Colonel POTTER. If I may add one sentence there. After the definite project report is completed, we then again analyze economics of the project, and if it is uneconomical, based on that estimate, we do not come in for construction funds, and that has happened.

I invite the committee's attention to that. I would like to have a categorical answer from the Corps of Engineers at this time as to whether, when the Corps of Engineers asked for $5,735,000 of the Bureau of the Budget for construction and planning of the proposed Tombigbee-Tennessee waterway for the fiscal year 1949, the definite project report had been completed for the entire project.

General PICK. It had not.

Mr. DONNELLY. May I ask this categorical question? At that time, had the definite project report for the Gainesville lock and dam been completed?

General PICK. It has just been developed here, sir, that the definite project work had been completed for the lock at the Gainesville Dam, and the plans and specification for that are, I believe, 97 percent complete.

Mr. DONNELLY. As of July 19, 1950?

General PICK. That is correct, I believe.

Mr. DONNELLY. Can you explain your testimony of April 3, when you said:

> After doing all that, then we get some funds to start making up detailed plans and specifications, and we work those up. When that is done, we are ready to ask for construction funds.

General PICK. That testimony is in general the procedures to which we go to get a project started.

Mr. DONNELLY. Let me ask this question categorically: In the fiscal years 1949 and 1951, when the Corps of Engineers asked for construction money for the proposed Tombigbee project, did the Corps of Engineers advise either the Bureau of the Budget or Congress that the definite project report for the Gainesville lock section had been completed?

General PICK. I do not remember what was testified to before the committee, sir. That can be determined from the record.

Mr. DONNELLY. May I ask this question: Was Congress told in the fiscal year 1949, when the Bureau of the Budget estimated to Congress $1,500,000 for construction—was Congress told by the Corps of Engineers that if any definite project report had been completed for the Gainesville lock, that that was only a sectional definite project report and did not relate to the entire proposed Tombigbee waterway?

General PICK. I do not know what testimony was given then at that time. I cannot remember, sir. I do not think that I testified on it at all.

Mr. DONNELLY. Let us take up the rest of the items.

General CHORPENING. Yes; and both items 4 and 5 were telephoned over immediately for your use this morning. Since those items have to do with the estimated cost of the Tombigbee project in the fiscal years 1949 and 1951, I would like to have Mr. Slichter give you those direct.

Mr. SLICHTER. I do not have the question.

General CHORPENING. I have the sheet here.

Mr. SLICHTER. What is the request?

Mr. DONNELLY. For the fiscal years 1949 and 1951.

Mr. SLICHTER. The estimated cost for 1949, estimated for the Congress, was $136,244,200. For 1951, for the estimate submitted to Congress, $169,117,000.

Mr. DONNELLY. As I understand, not to be repetitious, neither one of those estimates for the construction cost of the entire project was based upon a definite project report. Am I correct, General?

General PICK. That is correct, not a complete definite project report.

Mr. DONNELLY. Now, I refer again to your testimony before the committee on April 3, 1951, and I read the sentence that I read before:

> All of that goes in for this definite project report in order to come up with as sound a figure as possible to determine the cost.

The two figures just supplied by Mr. Slichter were not "as sound a figure as possible to determine the cost" of the entire project, were they?

General PICK. That statement of mine before the committee was a general statement outlining for the information of the committee the steps that we go through in working up a project for construction. At that time I did not have any particular project in mind. I was giving the general steps that we go through.

If you tie that statement down to a definite project, such as the Tennessee-Tombigbee, then the statement is not in accordance with the facts on the Tennessee-Tombigbee project. However, sufficient definite project report studies on the Tennessee-Tombigbee waterway were sufficiently advanced to start construction of the first unit, the Gainesville lock.

Mr. DONNELLY. This is quite an important matter, General, for this reason: The committee has asked of the Corps of Engineers for the dates of the definite project reports for the entire 182 projects. We have a preliminary determination that it is not an exception that a definite project report is not completed, and a sound estimated cost figure available, before the Corps of Engineers asks for construction funds. We will be asking General Chorpening from time to time during the next several months for documents for each of the 182 projects which we will ask him to identify as "the definite project reports" for each of them, and the completion date for each of those definite project reports.

NAVIGATION REGULATIONS FOR MISSISSIPPI SOUND

I would like to put in the record at this time relating to navigation across the Mississippi Sound, the navigation regulations which have been prescribed by the Secretary of War, and I will ask the general, if he will tell me, or one of his assistants, whether these are the regulations still in effect.

General PICK. Mr. Faison, are you familiar with these?

Mr. FAISON. No, sir; I have never seen them.

Mr. DONNELLY. If you cannot verify them immediately, may I suggest that those regulations were placed in effect by the Secretary of War in 1946? Let me put them in the record for the relevancy that they do have. I refer only to a page or several paragraphs there that deal with navigation on the Intracoastal Waterway, and the size, assembly, and handling of tows; also subsection (i) and several other sections of these regulations which do have relevancy here.

(The matter referred to is printed in the appendix.)

WATER TRAFFIC BETWEEN NEW ORLEANS AND MOBILE

Mr. DONNELLY. I also offer for the record extracts from the annual report of the Chief of Engineers for traffic, Gulf Intracoastal Waterway, freight traffic between Mobile and New Orleans for the year 1948. If I may, I would like to put them in at this point.

(The matter referred to is as follows:)

[Annual Report of Chief of Engineers, 1949, Part 2, Commercial Statistics, p. 1525, Statistics for the year 1948]

GULF INTRACOASTAL WATERWAY

Freight traffic between Mobile and New Orleans

Total barge trips:	
East-bound	2,814
West-bound	2,876
Total ton-miles through traffic	306,305,050
Average haul per ton, miles	118
Total tons, through traffic	2,595,067
East-bound	1,863,918
Largest items:	
Gasoline	1,069,327
Fuel oil	311,772
Kerosene	105,930
Total (57 percent)	1,487,029
West-bound	730,490
Largest item:	
Limestone (66 percent)	479,501

WATER TRAFFIC AT PORTS OF NEW ORLEANS AND MOBILE

Mr. DONNELLY. I also offer for the record further extracts from House Document No. 392, part II, entitled, "Commercial Statistics Water-Borne Commerce of the United States," for the calendar year 1948, Annual Report of the Chief of Engineers, 1949.

I would like to put these in the record where they are marked on these photostats. They relate to barge traffic in and out of Mobile and in and out of New Orleans.

Mr. RABAUT. The parts crossed off are to be eliminated, is that right?

Mr. DONNELLY. Yes, sir.

Mr. RABAUT. All right.

Mr. DONNELLY. I would like to put these in the record without objection.

(The matter referred to is as follows:)

MOBILE HARBOR, ALA. (INCLUDES TRAFFIC OF THREE MILE CREEK AND CHICKASAW CREEK)

Section included: Mouth of Mobile River to 400 feet south of Shell Bayou in Chickasaw Creek, Mobile Bay and outer bar. *Controlling depth:* Mobile River channel, 32 feet; Mobile Bay channels, 31.5 feet; outer bar channel, 35 feet; Chickasaw Creek channel from highway bridge across river to 400 feet south of Shell Bayou in creek, 25 feet. *Project depth:* Mobile River and Mobile Bay channels, 32 feet; outer bar channel, 36 feet; Chickasaw Creek channel from highway bridge across river to 400 feet south of Shell Bayou in Creek, 25 feet. *Navigation season:* Entire year

Comparative statement of traffic

Year	Tons	Passengers	Year	Tons	Passengers
1939	4,685,484	1,967	1944	2,851,616	461
1940	4,950,554	838	1945	4,287,408	933
1941	5,124,624	809	1946	5,414,896	2,275
1942	4,406,065	487	1947	6,652,571	453
1943	3,855,206	738	1948	7,072,701	2,798

Trips and drafts of vessels

Draft (feet)	In-bound				Out-bound			
	Steamers	Motor vessels	Barges	Total	Steamers	Motor vessels	Barges	Total
31	4			4				
30	3			3	2			2
28 to 30	126	13		139	127	2		129
26 to 28	90	5	2	97	85	7		92
24 to 26	64	4		68	71	4		75
22 to 24	122	13		135	115	10		125
20 to 22	123	15		138	134	8		142
18 to 20	110	17	1	128	158	17		175
Less than 18	477	4,432	5,184	10,093	420	4,444	5,182	10,046
Total	1,119	4,499	5,187	10,805	1,112	4,492	5,182	10,786
Total net registered tonnage				6,563,035				6,530,222
Passengers	2,180			2,180	618			618

Mississippi River, New Orleans, La., to Mouth of Passes (Included in Mississippi River, Minneapolis to Mouth of Passes)

Section included: New Orleans, La., to Mouth of Passes. *Controlling depth:* Not less than 35 feet. *Project depth:* 40 feet. *Navigation season:* Entire year

Comparative statement of traffic

Year	Vessel traffic	Rafted	Total	Passengers [1]		Additional traffic, car ferry
				Excursion	Regular	
1939	21,560,340		21,560,340	1,695,808	36,248	2,767,051
1940	23,619,462		23,619,462	1,134,334	32,956	3,553,480
1941	24,791,458		24,791,458	1,153,234	31,397	4,180,000
1942	22,232,779		22,232,779	1,320,788	15,955	2,945,000
1943	22,211,329		22,211,329	726,322	16,917	
1944	27,491,230		27,491,230	680,390	6,954	
1945	29,701,984		29,701,984	944,634	10,099	
1946	26,409,038		26,409,038	888,598	17,485	
1947	33,134,113		33,134,113	726,292	35,682	
1948	34,804,889	115	34,805,004	645,748	48,042	

[1] Ferry passengers not included.

Trips and drafts of vessels

Draft (feet)	Up-bound				Down-bound			
	Steamers	Motor vessels	Barges	Total	Steamers	Motor vessels	Barges	Total
32 to 34	23			23	31			31
30 to 32	42		1	43	182	5		187
28 to 30	248	4		252	365	17		382
26 to 28	145	29	1	175	342	32		374
24 to 26	265	32	1	298	290	28		318
22 to 24	275	43	1	319	344	53		397
20 to 22	667	60	9	736	970	50	1	1,021
18 to 20	883	70	1	954	732	77	1	810
Less than 18	2,410	10,279	12,899	25,588	1,690	10,241	12,899	24,830
Total	4,958	10,517	12,913	28,388	4,946	10,503	12,901	28,350
Total net register tonnage				19,052,944				18,695,023
Passengers	349,214			349,214	344,576			344,576

Port of New Orleans, La.

[*Section included:* Both banks of the Mississippi River from mile 941.6 below Cairo, Ill., to the mouth of the Passes. *Navigation season:* Entire year]

Comparative statement of traffic

Year	Vessel traffic				Passengers
	Corporate limits of New Orleans	Points above corporate limits	Points below corporate limits	Port of New Orleans	
	Tons	*Tons*	*Tons*	*Tons*	
1939				16,304,530	1,146,318
1940	15,661,397	2,808,773	1,325,429	19,795,599	1,315,866
1941	16,031,489	3,278,445	1,597,335	20,907,269	1,355,934
1942	14,629,917	6,777,669	1,229,629	22,637,215	1,485,522
1943	15,118,818	5,555,391	654,478	21,328,687	743,239
1944	16,036,605	6,823,472	1,088,429	23,948,506	687,344
1945	17,577,272	6,402,896	1,224,364	25,204,532	954,733
1946	16,593,644	5,509,499	2,104,590	24,207,733	962,030
1947	22,023,215	5,792,399	2,073,786	29,889,400	761,974
1948	19,940,611	5,882,745	2,726,274	28,549,630	693,790

Trips and drafts of vessels

Draft (feet)	In-bound				Out-bound			
	Steamers	Motor vessels	Barges	Total	Steamers	Motor vessels	Barges	Total
33					3			3
32	5			5	24			24
31	3		1	4	99			99
30	11			11	135	11		146
28 to 30	148	3		151	406	74		480
26 to 28	158	18	1	177	330	31		361
24 to 26	273	20	1	294	342	28	10	380
22 to 24	431	52	1	484	279	53		332
20 to 22	359	67	8	434	240	50	1	291
18 to 20	538	116		654	279	76	1	356
Less than 18	2,809	13,805	18,261	34,875	2,590	13,608	18,195	34,393
Total	4,735	14,081	18,273	37,089	4,727	13,931	18,207	36,865
Total net register tonnage				20,783,129				20,698,569
Passengers	349,214			349,214	344,576			344,576

Mr. Donnelly. Now, may the record show that at the time of recess we have a full subcommittee here present? May we recess now, Mr. Chairman?

Mr. Rabaut. Yes.

Colonel Potter. I have not yet gotten an answer as to our prerogatives in correcting the testimony, and I think it is of some importance.

Mr. Rabaut. You mean the question you raised before?

Colonel Potter. Yes, sir, and any such similar one. Since the statement that has not changed.

Mr. Rabaut. Well, we had a little talk about it, and I think anything done about that ought to be done in executive session. So, we will take the request for it.

Colonel Potter. Should we then indicate where changes should be made so that they may be presented?

Mr. Rabaut. Indicate where?

Colonel Potter. You see, we get at the end of each day a transcript of the day before. Now, there are changes in it that are required. For instance, as a minor one, Tombigbee is always given as two words.

Mr. Rabaut. Yes.

Colonel POTTER. I have that slip of the tongue that I very humbly admit.

Mr. RABAUT. In this statement we are trying to make a general rule. Make a general request, a little written request, and we will take it up in executive session and change the record. We do not want to start a precedent. This is a very small matter we are talking about now, but we are apt to say, "Correct this," "correct that," or "correct something else," and eventually we will not have the same record, so we just want to say that we think it would be best to just submit a little request for the change and then we will take it up from time to time in executive session and permit the change in the record.

Mr. DAVIS. In each specific case.

Colonel POTTER. I am glad to get that information because we have been doing on this one transcript we have just like we did the others, and that is lining out and writing in.

Mr. RABAUT. Off the record.

(Discussion off the record.)

THURSDAY JUNE 21, 1951.

PRESENT: MESSRS. CANNON, KERR, RABAUT, DAVIS, AND FORD

PROPOSED TENNESSEE-TOMBIGBEE WATERWAY

WITNESSES

MAJ. GEN. LEWIS A. PICK, CHIEF OF ENGINEERS
BRIG. GEN. C. H. CHORPENING, ASSISTANT CHIEF OF ENGINEERS FOR CIVIL WORKS
COL. W. E. POTTER, ASSISTANT CHIEF OF ENGINEERS FOR SPECIAL PROJECTS
GEORGE L. BEARD, CHIEF, PLANNING AND DEVELOPMENT DIVISION
F. B. SLICHTER, CHIEF, ENGINEERING DIVISION
K. L. COLTRIN, ASSISTANT, ENGINEERING DIVISION
H. R. FAISON, CHIEF, ECONOMICS DIVISION, BOARD OF ENGINEERS FOR RIVERS AND HARBORS
A. L. MALONE, FIELD SERVICE BRANCH, ECONOMICS DIVISION, BOARD OF ENGINEERS FOR RIVERS AND HARBORS
E. E. BOTTOMS, CHIEF, REVIEW BRANCH, ECONOMIC DIVISION, BOARD OF ENGINEERS FOR RIVERS AND HARBORS
D. I. MCKAY, SPECIAL ASSISTANT TO CHIEF OF ENGINEERS

Present: John J. Donnelly, Jr., Esq., committee counsel, and Fred Korth, Esq., deputy counselor, Department of the Army.

Mr. CANNON. Mr. Chairman, I wonder if all of the witnesses to be presented today have been sworn? Are there any witnesses present who have not been sworn? If so, will you please stand?

(Mr. F. B. Slichter, Chief of the Engineering Division, Civil Works, Corps of Engineers, arose.)

Mr. CANNON. Do you solemnly swear the testimony which you will give to this committee of Congress will be the truth, the whole truth, and nothing but the truth, so help you God?

Mr. SLICHTER. I do.

Mr. CANNON. Mr. Chairman, a quorum is present, and I may say that a quorum has always been present at all of the sessions of the committee.

Mr. DONNELLY. May I proceed, Mr. Chairman?

Mr. KERR. Mr. Donnelly.

Mr. DONNELLY. With respect to the attendance of witnesses on behalf of the Corps of Engineers I do not believe that the official reporter got a full list of them at the opening of these hearings, and I wonder if General Chorpening, or someone in the corps, will furnish a typed list of all of those gentlemen present here today on behalf of the corps so that the record of attendance may be completed.

General CHORPENING. Yes, we will do that.

Mr. DONNELLY. Thank you, sir.

STATEMENT AS TO AVAILABILITY OF CORPS' RECORDS

Mr. Chairman, and members of the committee, there is present here this morning Fred Korth, Esq., deputy counselor of the Department of the Army. Mr. Korth, do you have any preliminary statement which you would like to make?

Mr. KORTH. None other than to say we have spoken with Mr. Donnelly, and subject of course, to the committee's approval, we have made arrangments now for a room to be available, beginning this afternoon at Gravelly Point, at which place there will be placed all of the records which are presently available which were requested by committee counsel. The records will be supplemented further by those records that are available here in Washington, and as expeditiously as possible the records in the field will be either sent in their original form or, if that is impossible, photostatic copies will be air mailed, so that there will be a complete and full presentation to the committee staff of the material required.

One further thing, Mr. Chairman, General Pick would like to make a brief statement, if he may, with reference to the Corps of Engineers' position.

Mr. KERR. Very well, sir, we will hear General Pick now.

TESTIMONY OF GENERAL PICK—Resumed

General PICK. Mr. Chairman and gentlemen of the committee, as you know, I have been present during the entire interrogation on the Tennessee-Tombigbee investigation. I have personally replied to many of the questions of the committee's counsel. I have followed very closely all of the testimony. Now that the interrogation on this project is, as I understand, to be concluded, I should like to make this statement by way of summarizing the position of the Corps of Engineers on some of the subjects that have come up.

First, I would wish to express the gratitude of my staff and myself for the courtesy the committee has shown us in this hearing and particularly for permitting us to ask questions and to present statements to clarify the counsel's questions and our replies thereto.

During the course of the hearing I asked that our written comments on the reports of the investigative staff on the Tennessee-Tombigbee and on the general investigation be included in the record of the hearing. This was denied. At this time I again make the request.

I think it only fair that the Corps of Engineers be permitted to insert in the record its replies to the investigative staff's report. This, for the reason that the committee will thereby be able to review all of the facts and to impartially judge the matter before the committee.

Also, there are several items of the investigative staff's criticism regarding the Tennessee-Tombigbee which have not been fully discussed in the hearing, and I would like to cover them briefly at this time.

Section II of the investigative staff report constitutes an independent appraisal of the economic merit of the Tennessee-Tombigbee waterway project based in part on the previous report of the Corps of Engineers and in part on developments that have occurred since that report was submitted. It embodies a detailed and circumstantial criticism of practically every step in the Corps of Engineers' procedure in collecting, analyzing, and evaluating field data and applying the results, and its findings are widely at variance with those reached by the Corps of Engineers.

The basic differences in the two reports appear to stem from a fundamental misconception on the part of the investigative staff as to the purpose of the survey, the intended function of the waterway, and the significance of present transitory restrictions on the free development of water-borne commerce. Without doubt some of the opinions gleaned by the investigative staff from informed sources as to the feasibility of the project have been in sharp conflict with observation and testimony from similar sources found acceptable by the Corps of Engineers' analysts as determinative. In such a situation, the comparative competence and familiarity of the respective staffs with the practical problems of water transportation and their respective experience in canvassing the field, and weighing the information offered by those with special interests to serve, would seem to afford the most reliable test of credibility. The ability to make sound appraisals of the sometimes overenthusiastic claims of waterway advocates is highly important, but it is equally essential to discount the natural hostility of intrenched carrier enterprises which want to forestall troublesome competition and which are dependent upon the good will of existing regulatory agencies.

The purpose of the economic survey conducted by the Corps of Engineers was not so much to expose temporary transportation conditions at that time, as to develop firm trends upon which to base a logical forecast of conditions bearing on the usefulness of the project throughout its economic life. This, the investigative staff report does not do. None of the years 1939, 1945, 1947, or 1949 could be regarded as normal, or as clearly indicative of long-term trends as might be desired.

During this period of transition, if such it is, an intensive study of all the ascertainable facts bearing on the probable role of the project is required, with particular emphasis on the history of the past years. The geographic position of the proposed connecting route, however, will always make it an important factor in the transportation of the predominant commodities of the future. The investigative staff's report, on the contrary, repudiates the records of previous years as of no significance, and advances its version of conditions of 1949 as conclusive for all time to come. Experience of the Corps of Engineers in the development of other successful waterways would seem to fur-

nish the most reliable guide in estimating the future performance of such projects as the Tennessee-Tombigbee improvement.

It is believed that in all essential respects the actions of the Corps of Engineers have been sound, based on sound judgment of information available at the time those actions were taken. The actions of the Corps of Engineers have been in accordance with the accepted practices of the engineering profession for work of comparable types. I note that the report of the investigative staff does not criticize the fundamental engineering concepts of the projects nor the engineering design and lay-out of the project works. The staff's discussion of the cost estimates and other engineering matters are, in effect, simply recognition of the fact that there are inevitably uncertainties in any large engineering project and that it is impossible to freeze all elements at any given time.

The analysis of the economics of the projects as contained in the reports previously submitted to Congress was also sound and valid for the purpose of informing the Congress as to the prospective benefits that would accrue if the projects were undertaken. The methods used are comparable to those employed on other projects for many years. The soundness of these procedures is attested by the record of performance on those projects for which reports have been rendered.

As an example I have made a detailed study of several of the major inland waterway projects which have been authorized and constructed in the past, which shows that the actual traffic that has developed greatly exceeded the traffic estimated by the Corps of Engineers at the time the improvements were recommended to the Congress.

Briefly, this study shows as to the Cape Cod Canal in Massachusetts that the annual commerce forecast to use the Cape Cod Canal when it was surveyed was estimated to be 7 million tons. The actual commerce recorded for 1949 amounted to 11,600,000 tons.

In the Kanawha River, W. Va., the tonnage estimated in the survey report to move over the Kanawha River was 1,800,000 tons. In 1949, the recorded commerce amounted to 4,956,000 tons.

On the Illinois waterway in Illinois, in the estimates prepared for authorization, we indicated that it was anticipated that 7,500,000 tons would utilize this waterway. The actual tonnage for 1949 amounted to 12,895,000 tons.

On the Intracoastal Canal, the Gulf Intracoastal Canal from New Orleans to Corpus Christi, Tex., when that waterway was authorized over this strip of the waterway it was estimated that about 7,000,000 tons would utilize the waterway. In 1949 18,971,671 tons moved over this waterway.

The Ohio River navigation project is probably one of the most outstanding examples. The Ohio River navigation project as justified by the Corps of Engineers was estimated to carry a tonnage of 9,000,000 tons. The commerce utilizing that waterway in 1949 amounted to 41,300,000 tons.

Mr. Chairman, I only call attention to these to show how conservative the Corps of Engineers has been in the past in its recommendations to Congress as to what use would be made of these waterways. In each and every case where a waterway has been in existence for any reasonable length of time the original estimates of the amount of tonnage moving over it have been exceeded.

Mr. Chairman, that completes my statement.

Mr. CANNON. We are very glad to have this statement from General Pick, and the committee appreciates the fine cooperation and the invaluable assistance rendered by General Pick and by his counsel and by his staff and by the Department in this inquiry.

Of course, it has not been customary for us to include in any of our hearings the report of our staff investigation, and, of course, we do not include any reply to such report which is not in the record. They are entirely too voluminous and would be too extensive to print, and the salient points in all of them have been covered, or will be covered, in the course of the investigation. The committee endeavors, and I trust with success, and, of course, counsel of the committee represents that point of view, to avoid any digression from the subject before us and from the immediate inquiry before the committee at this time, but as each point is brought up or raised by our counsel we hope that General Pick and his staff will feel free to reply as completely and adequately and voluminously as they think the situation warrants.

General PICK. Thank you, sir.

Mr. CANNON. Mr. Donnelly.

Mr. DONNELLY. Thank you, Mr. Chairman.

ECONOMIC STUDY BY COMMITTEE STAFF

At the outset, I believe for the record I should state that much of General Pick's statement just made related to a portion of the committee investigative staff's report that has not yet been the subject of the hearings here, but a portion to which we will direct our attention, starting today. It deals with the economic phase, section II of the investigative staff's report. The investigative staff of this committee which did the field work and which made the report was composed of two engineers, an economist, and an investigator. The files of the Corps of Engineers were studied and in addition the site of the proposed project, the Tennessee-Tombigbee project, was visited and numerous people in the general area of the project were interviewed.

The investigative staff approached the problem of appraising and evaluating the economic benefit of the project in two ways:

First, all of the computations and calculations made by the Corps of Engineers themselves in 1945 and later in 1947 were very carefully studied by the staff. They were studied in such detail that in most cases the detailed worksheets of the Corps of Engineers were requested.

With respect to some of the detailed worksheets representing several thousand freight movements, the Corps of Engineers no longer had those worksheets available.

The staff studied every facet of the computations by the Corps of Engineers, but there is quite a wide variance, as General Pick has stated, between the conclusions from the two methods of computation. The staff's method was the same as the Engineers' method, but the investigative staff of the committee, as I think these hearings will develop, based their conclusions more upon reality and actual fact than the Corps of Engineers did. All of those matters will be developed as the hearings proceed here.

PREDICTED TONNAGE MOVEMENTS ON WATERWAYS

Now, with respect to the forecast by the Engineers of movement of traffic on this waterway, General Pick has stated that in every case the movement of freight on inland waterways had exceeded original estimates.

Now, I want to ask General Pick again if that is a correct statement, or whether he wants to qualify that statement, the statement that in every case the forecast of the Corps of Engineers with respect to the movement of freight on inland waterways has been exceeded.

General PICK. I said on these major projects where they have been in operation for a considerable period of time they exceeded the estimated tonnage.

WATER TRAFFIC ON THE TENNESSEE RIVER

Mr. DONNELLY. General Pick, is that true with respect to the Tennessee River?

General PICK. I am not sure about that. I do not think probably it is, the Tennessee has not been completed very long.

Mr. DONNELLY. Let me read from Table I-A, Corps of Engineers, contained in 1950 report of the Corps of Engineers to the President's Water Resources Policy Commission, the section dealing with the "Tennessee River, Knoxville to mouth of River at Paducah, Ky." (The pertinent excerpt is as follows:)

TENNESSEE RIVER, KNOXVILLE TO MOUTH OF RIVER AT PADUCAH, KY.[1]

Slack water navigation from the mouth to mile 650 is provided by means of 11 locks and 10 dams. Project depth is 9 feet. Lock and Dam No. 1, Wilson locks and dam and Wheeler lock were constructed by the Corps of Engineers, and Hales Bar lock and dam were constructed by the Chattanooga & Tennessee River Power Co., under the supervision of the Corps of Engineers. The remaining navigation facilities, some of which were designed by the Corps of Engineers, were constructed by the Tennessee Valley Authority. All the navigation facilities are operated and maintained by the Corps of Engineers including channel maintenance dredging. Annual charges shown are those for operation and maintenance by the Corps of Engineers. The annual capital charges on the cost of $151,433,329 allocated to navigation facilities on the Tennessee River by the Tennessee Valley Authority are not known.

Commercial traffic carried on the Tennessee River in 1948 amounted to 2,963,264 tons and moved 442,638,000 ton-miles on that river. In a study made in 1941 by the Commerce Department of the Tennessee Valley Authority, published in House Document No. 159, Seventy-ninth Congress, first session, the prospective future traffic on the Tennessee River was estimated at 7,000,000 tons and transportation savings were estimated at $9,088,700 annually.

The Corps of Engineers, in a study made in 1948 on the basis of traffic trends in recent years and other data, estimated prospective future commercial traffic at about 5,500,000 tons and annual savings on that traffic of about $8,104,000, on the assumption that locks at Wilson Dam probably will require replacement at an estimated additional capital cost of about $24,800,000. In addition, annual benefits to extensive small craft operation were estimated at about $1,000,000, and the annual saving in dredging costs on the lower Ohio and Mississippi Rivers due to low-water regulation from the Tennessee River at about $260,000, making total benefits to navigation of approximately $9,364,000.

If I may I will paraphrase that rather long quotation from it, and I will submit the entire quotation to General Pick so that he can follow it as I go along.

[1] Source: I-A, Corps of Engineers, contained in 1950 report of the Corps of Engineers to the President's Water Resources Policy Commission.

Mr. KERR. Is that a part of the record?

Mr. DONNELLY. No, sir; not at this point, Judge. I am just at this time alluding to it for the first time, and it is based upon the report of the Corps of Engineers.

Now, I find at the bottom of page, General, the Corps of Engineers in a study made in 1948 on the basis of traffic and traffic trends in recent years and other data estimated the prospective future commercial traffic at 5,500,000 tons, and annual savings on that traffic of about $8,104,000, on the assumption that locks at Wilson Dam probably will require replacement at an estimated additional capital cost of about $24,800,000.

Now, going back to the first page, General, in the second paragraph there is a statement there, which I assume was made by the Corps of Engineers on the basis of their official statistics of the movement of water-borne traffic on the Tennessee River, which shows that the commercial traffic carried on the Tennessee River in 1948 amounted to 2,963,264 tons and moved 442,638,000 ton-miles on that river.

Reading down a little farther we find that the TVA had estimated prospective future traffic on the Tennessee River at 7,000,000 tons. So that, to round off the figure so that the committee can follow this, we have the Corps of Engineers in 1948 estimating the traffic at 5,500,000 tons. In that same year the Corps of Engineers in their official statistics found that only 3,000,000 tons were moving, so that the forecast was almost double the actual movement in the year 1948.

General PICK. What was that forecast for? For what year was that for?

Mr. DONNELLY. At the bottom of page 1?

General PICK. Was that forecast made by the Corps of Engineers for 1948?

Mr. DONNELLY. This is in the exact language of the Corps of Engineers contained in the 1950 report of the Corps of Engineers to the President's Water Resources Policy Commission, and it says:

> The Corps of Engineers, in a study made in 1948, on the basis of traffic trends in recent years and other data, estimated prospective future commercial traffic at about 5,500,000 tons.

General PICK. I think that is correct. I do not know what life that was based on. I do not know whether that was based—Mr. Faison, do you know what life of the project that was based on?

Mr. FAISON. No, sir; I do not know anything about that.

General PICK. You see, Mr. Donnelly, that is what we use, what we might expect it would reach during the life of the project—we figure out the life of the project for economic justification in 50 years, 75 years, or whatever it is. I do not know what that figure was based on, but that is what it was based on, on an economic ratio to what we call the economic life of the project.

Mr. DONNELLY. Now, Congressman Jennings, of Tennessee, whose district is in the area of Knoxville, Tenn., had occasion in a speech on the floor of the House on June 6, 1946, to refer to the traffic on the Tennessee River in his district, and I would like to read his statement. This is from volume 92, Congressional Record, part 5, June 6, 1946, page 6405:

> Mr. JENNINGS of Tennessee. Of course, that is the question now before us. They talk about transportation by river. The first thing I did when I came to Congress, within 10 days after I took my seat, was to make a speech in favor

of the construction of a dam. Fort Loudoun Dam, costing $10,000,000. That was a good project. They are making power down there; but I had an idea that we would have transportation of freight by water to and from my city of Knoxville, the upper reaches of the Mississippi River, and the Gulf of Mexico. That dam has been completed for 4 years and we have had but little traffic by water. The transportation of freight over the 9-foot channel that extends from Knoxville to the Gulf and to the upper reaches of the Mississippi is negligible.

Do you care to make any comment on Congressman Jennings' statement, General?

General PICK. No; I have no comment to make on his statement. I would like to say though, sir, that you know the Kentucky Dam at the mouth of the Tennessee River was not completed until 1943 or 1944, during the war, and until that was completed no other traffic was considered that could get into the Tennessee River.

Mr. DONNELLY. Now, General, in the official statistics of the Chief of Engineers, United States Army, 1949, we find the movement of traffic on the Tennessee River, Tennessee, Alabama, and Kentucky. I would like to insert these figures in the record at this point, and furnish a copy of them to each member of the committee here.

(The matter referred to is as follows:)

TENNESSEE RIVER, TENN., ALA., AND KY.

[*Section included:* Mouth to Knoxville, Tenn. (head of river), 650 miles. *Controlling depth:* 8 feet, mouth to head of river. *Project depth:* 9 feet. *Navigation season:* Entire year, mouth to head of river]

Comparative statement of traffic

Year	Vessel traffic	Rafted	Total	Passengers	Year	Vessel traffic	Rafted	Total	Passengers
	Tons	*Tons*	*Tons*			*Tons*	*Tons*	*Tons*	
1939	1,112,734	2,497	1,115,213	17,494	1944	2,347,519	148	2,347,667	1,626
1940	2,204,821	2,092	2,206,913	72,850	1945	2,163,404	.....	2,163,404	654
1941	3,092,849	817	3,093,666	32,670	1946	2,399,250	.....	2,399,250	14,111
1942	2,835,813	792	2,836,605	31,659	1947	2,792,427	.....	2,792,427	13,076
1943	2,865,984	3,234	2,869,218	2,493	1948	2,963,264	.....	2,963,264	1,593

ADDITIONAL TRAFFIC

Year	Car-ferry traffic	Year	Car-ferry traffic
1939	143,331	1944	135,004
1940	88,389	1945	186,290
1941	163,000	1946	156,038
1942	323,438	1947	143,445
1943	149,419	1948	146,664

Freight traffic, 1948

DOMESTIC

[Short tons]

Commodity	Total	Inbound	Outbound	Upbound	Downbound
001 Wheat	25,539	25,539			
003 Corn	33,894	33,194			700
007 Oats	3,321	3,321			
299 Shells, sea, n. o. s	4,034		1,715	1,141	1,178
305 Bituminous coal	445,554	211,508		66,264	167,782
307 Coke	26,841	26,841			
323 Clay, n. o. s	33,603				33,603
327 Sand and gravel	1,776,997	300,420	42,000	638,060	796,517
329 Limestone, concrete aggregate	800				800
339 Asphalt	1,889	1,289	600		
399 Magnesite	242		242		
407 Ties, railroad, wooden	40,249		40,249		
411 Lumber, n. o. s	11,253		11,253		
501 Gasoline	460,215	41,099		50,116	
503 Fuel oil	9,613	3,633			
505 Lubricating oil	452	452			
507 Petroleum products, refined	21,654	21,654			
Kerosene	*17,359*	*17,359*			
Petroleum products, refined, n. o. s	*4,295*	*4,295*			
527 Chemicals	19,609		19,609		
Magnesium sulfate	*2,495*		*2,495*		
Phosphates, n. o. s	*11,663*		*11,663*		
Chemicals, n. o. s	*5,451*		*5,451*		
539 Fertilizers, n. o. s	1,169		1,169		
577 Sheets, iron and steel	491	491			
583 Manufactured iron and steel	2,135	341	295	1,287	212
Structural iron or steel	*1,586*	*341*	*120*	*925*	*200*
Manufactured iron or steel, n. o. s	*549*		*175*	*362*	*12*
595 Machinery and machines	2,918	120	300	2,128	370
Construction equipment, n. o. s	*550*			*400*	*150*
Contractors' equipment	*858*	*120*	*300*	*268*	*170*
Electric machinery	*1,275*			*1,225*	*50*
Machinery, n. o. s	*235*			*235*	
597 Machinery parts	200			200	
613 Automobiles, passenger	31,608	31,608			
617 Tractors	15			15	
685 Electrical equipment and parts	2,410			1,850	560
779 Drums, iron or steel	232		232		
798 Vessels on own bottoms, new	5,787	240	5,547		
Vessels, self-propelled, draft less than 12 feet	*240*	*240*			
Vessels, non-self-propelled	*5,547*		*5,547*		
799 Manufactures and miscellaneous, n. o. s	540	530		10	
Boats and parts, n. o. s	*10*			*10*	
Tents	*530*	*530*			
Grand total	2,963,264	1,077,260	123,211	761,071	1,001,722

Total ton-miles, 442,638,169.

ADDITIONAL TRAFFIC

	Tons
Car ferry, Guntersville to Hobbs Island, 21.3 miles	146,664

Ton-miles, 3,123,943.

The above tonnage figures include Government materials consisting of 43,244 tons of sand and gravel.

Trips and drafts of vessels

Draft (feet)	Up-bound				Down-bound			
	Steamers	Motor vessels	Barges	Total	Steamers	Motor vessels	Barges	Total
12 to 14			4	4				
10 to 12		1		1		1		1
8 to 10		44	669	713		35	208	243
6 to 8	9	423	1,675	2,107	9	409	2,492	2,910
4 to 6		762	595	1,357		745	2,175	2,920
2 to 4	208	2,748	201	3,157	208	2,770	2,012	4,990
Less than 2		1,729	6,075	7,804		1,730	2,252	3,982
Total	217	5,707	9,219	15,143	217	5,690	9,139	15,046
Total net register tonnage	35,446	159,231	1,564,655	1,759,332	35,446	158,211	1,527,182	1,720,839
Passengers				800				793

Mr. DONNELLY. We find in freight traffic for 1948 a total tonnage moving of 2,963,264 tons, of which over half, 1,776,997 tons was sand and gravel.

Now, General, may I ask you, if you have personal knowledge of the subject, whether that sand and gravel was moved for the purpose of constructing any of the waterway improvements along the Tennessee River?

General PICK. You mean these are last year's statistics?

Mr. DONNELLY. These are 1949 statistics for 1948.

General PICK. I cannot tell you. I am not familiar with that, but I am pretty sure that if there was any construction work going on down there that part of that was going to construction work. However, I might ask Mr. Faison if he could throw any light on that.

Mr. FAISON. No, sir, I do not know anything about the Tennessee River statistics.

General PICK. That sand and gravel usually moved to the centers where the sand and gravel is desired downstream, to the cities along the river, Chattanooga and Knoxville.

Mr. DONNELLY. General, sand and gravel is known as a construction aggregate, is it not?

General PICK. Well, yes.

Mr. DONNELLY. And in the economic justification by the Corps of Engineers for these projects can you make a general statement as to whether the potential movement of construction aggregates is used in the economic ratios to justify the project?

General PICK. Well, tonnage is used in the economic ratio, I mean used in formulating the economic ratio. It does not make a bit of difference how it moves.

Mr. Faison, what do you do about that?

Mr. FAISON. As a rule anything that is done for the project itself, for the construction of the project itself, is not used in justification as commercial freight.

Mr. DONNELLY. Also we find in these statistics the movement of bituminous coal, 445,554 tons. Then we find the movement of gasoline 460,215 tons.

SAVINGS FROM WATER MOVEMENT OF PETROLEUM NOT PASSED ON TO THE CONSUMER

General, can you tell us whether it is not a fact that petroleum products move in industry-owned bottoms, as a rule?

General PICK. I think most of it does, yes. Is that correct, Mr. Faison?

Mr. FAISON. Some does and some does not. I would say more moves in industry bottoms.

General PICK. Most of it I think moves in company-owned bottoms.

Mr. DONNELLY. The reason I ask that question for the record is that one of the members of the committee asked me a question some days ago with respect to whether savings accruing to such industries as petroleum, by virtue of their use of inland waterways are passed along to the consumer, and I have some significant data on that subject which I would like to get into a little later; at this point I would like to continue going into some of the facets of your statements of a few minutes ago.

Mr. FORD. May I ask this one question? Are the chart to which you referred and the tonnage to which you referred comparable to the area mentioned in Congressman Jenning's statement, which has been inserted in the record?

Mr. DONNELLY. Yes, it is, Congressman; because the statistics show that the tonnage is from the mouth of the Tennessee River to Knoxville, Tenn.; and Congressman Jenning's statement was with respect to Knoxville.

TONNAGE DECREASES ON SOME WATERWAYS

General, further with respect to your statement that inland waterways generally exceeded in tonnage moved the forecasts of the Corps of Engineers—is that right?

General PICK. I said that they have; those that I read off, they have.

Mr. DONNELLY. Did I understand you to state that generally?

General PICK. Yes, generally.

Mr. DONNELLY. Is it not true that in some cases inland waterways are found, after they have been in operation for some years, to be economically unjustified, even from the standpoint of maintaining the waterways, and therefore it is desirable in the national interest to close them down?

General PICK. Yes. We have several instances of waterways that performed the function that they were designed to perform and their usefulness has passed. One of the outstanding examples, I think, is the Fox River up in Wisconsin.

Mr. DONNELLY. The Fox River, General, if I may interject for a moment, is composed of nine locks and seven dams and the Corps of Engineers plans to close down that particular waterway, with a saving of $540,000?

General PICK. Yes. We reported that to the committee.

Mr. DONNELLY. Another outstanding example is the Illinois and Mississippi Canal in Illinois, which is composed of 34 locks and other structures, which the Corps of Engineers plans to close down, with a savings of $1,500,000; is not that correct?

General PICK. Yes, sir. You see, the Illinois River was developed 100 years ago. You outgrow the usefulness of some of these projects because of better transportation facilities.

Mr. DONNELLY. General, you spoke, I believe, of the Kanawha River; I want to ask you if the Corps of Engineers does not plan to close down the waterway known as the Little Kanawha River in West Virginia, composed of four locks and dams, with a saving of $1 million?

General PICK. Yes. That waterway—we have not spent any money to maintain it, to speak of, for a considerable period of time. It has just died by itself. We have not spent any money to maintain it for 10 years. Mr. Donnelly knows that I was not talking about that when I was speaking about the tonnage.

Mr. DONNELLY. To make the record complete, let me tabulate these quickly for the record. These are waterways to be closed down with savings.

Osage River, Mo.: One lock and dam; saving $50,000.

Upper Kentucky River, Ky.: Seven locks and dams; savings $480,000.

Green River, Ky.: Two locks and dams; savings $120,000.

Big Sandy River, Ky.: One lock and dam; savings $150,000.

The heading of the savings column is this: "Total estimated cost to operate and maintain for the next 6 years."

Do the savings I have read off represent the savings over a period of 6 years, General?

General PICK. May I ask Colonel Potter that question? Do you know whether it is 6 years or not?

Colonel POTTER. I think that is the period that we use. Normally our budget is worked out 6 years ahead.

COST OF PROPOSED TOMBIGBEE PROJECT

Mr. DONNELLY. In order to orient the committee with respect to the economic phase of the Tombigbee project I would like, if I may, to pass to members of the committee the pertinent fundamental data from which computations have been made.

(The matter referred to is as follows:)

Proposed Tombigbee waterway—Federal investment and annual charges

Federal investment	Chief of Engineers				Staff, 1950[1]
	1939	1945	1947	1950	
Estimated first cost of Corps of Engineers	$65,318,300	$116,741,000	$136,244,200		$205,290,000
Estimated first cost of Coast Guard (navigation)	21,000	200,000			250,000
Total first cost	65,339,300	116,941,000	136,244,200	$179,264,000	205,540,000
Interest during construction period at 3 percent (one-half construction period)	7,689,400	8,771,000			30,831,000
Total investment	73,028,700	125,712,000			236,371,000
Federal annual charges:					
3½ percent of total Federal investment	2,556,000				
3 percent of total Federal investment		3,771,000			7,091,000
Amortization of Federal investment	238,400	1,168,000			2,133,000
Maintenance and operation	477,000	806,000			1,373,000
Total	3,271,400	5,745,000	6,964,000	8,370,000	10,597,000

[1] Investigative staff of the House Appropriations Committee.

ESTIMATED TOTAL FEDERAL COST OF TOMBIGBEE PROJECT BY MAJOR CATEGORIES OF CONSTRUCTION

There appears below a tabular statement of the estimated total Federal construction cost of the proposed waterway, as submitted by the Chief of Engineers and by the investigative staff of the House Appropriations Committee:

Item	1939 report, Chief of Engineers	1945 report, Chief of Engineers [1]	1950 report, staff [2]
Locks	$26,485,400	$46,324,000	$85,271,000
Dams	6,853,300	9,108,000	16,763,000
Channels and canals:			
Rectification and cut-offs	3,684,200	5,806,000	9,554,000
Lateral canal	11,053,300	14,898,000	19,359,000
Divide cut	13,806,300	36,000,000	66,485,000
Bridge, alterations, and new railway		2,134,000	4,265,000
Relocations:			
Railway	2,740,500	1,291,000	2,049,000
Utilities	17,000	80,000	100,000
Cemeteries		5,000	10,000
Rights-of-way and flowage:			
River		139,000	191,000
Canal	678,300	575,000	748,000
Divide		381,000	495,000
Aids to navigation	21,000	200,000	250,000
Total	65,339,300	[1] 116,941,000	[3] 205,540,000

[1] Increased size of locks, increased divide cut channel width and includes 35 percent for engineering and contingency except divide cut which includes 25 percent.

[2] The 1950 estimates of cost, submitted by the staff, are based on the same quantities and the same plans as were used by the Board of Engineers for Rivers and Harbors in the 1945 report, this being the only information available. Unit costs used in the staff's 1950 estimate were obtained by tabulating the following information: The average of bids submitted by the 3 low bidders, on various items, for construction of Cheatham Lock and awarded for construction in 1950; the average of bids submitted by the 3 low bidders on various items, for the gates, valves, and operating machinery for Cheatham Lock and awarded in June 1950; the average of bids submitted by the 3 low bidders on various items, for construction of the Jim Woodruff Lock and Dam, awarded in 1949; and average low bid prices submitted on preliminary excavation for, and the access road to the Demopolis Lock and Dam, awarded in 1950. The present day unit costs on various items were also obtained in both the Nashville and Mobile districts. From the average low bid prices received on recent comparable work together with the unit prices prevailing in districts where the waterway will be constructed, the unit prices of various pertinent items were established by the staff. The unit prices so established were used to arrive at the staff estimate of the cost of the project. Subject to the limitations imposed by the incompleteness of the basic data and by the absence of any final design of the proposed waterway this staff estimate is considered to be accurate as of July 1, 1950. The estimate makes no allowance for price increases subsequent to or caused by military operations in Korea. The estimate is therefore definitely conservative as of July 1, 1950.

[3] Same design as in 1945 report; includes 35 percent for engineering and contingency except divide cut which included 25 percent.

Colonel POTTER. I would like to wind up that item, if I may. All of the waterways you have mentioned so far as obsolete or obsolescent have, during their period of life, carried an economic traffic. The conditions that caused the waterway to be built have all disappeared or are disappearing and our action then is to report to the committee our findings and leave it to their judgment to agree with our proposal or not.

Mr. DONNELLY. I think it is primarily a question of interest in this sense, that the feasibility of the construction of inland waterways will vary with economic conditions, because the statute sets up the benefit cost ratio and, as economic conditions fluctuate, either before a project is authorized or after it is authorized, then the new economic conditions bearing on the ratio are of interest to the Congress. And with respect to these so-called obsolete waterways I think reference to them is relevant to show that in the past waterways have, because of changing conditions, been retired from service, or will be.

BENEFIT-COST RATIO FOR TOMBIGBEE

I would also like to put in the record at this point the crux of the entire matter of the economic staff investigation and the Corps of Engineers investigation with respect to the benefit-cost ratio, by way of orientation, for the purpose of getting into these more complex computations.

(The matter referred to is as follows:)

Cost-benefit ratios

	Estimated annual savings	Estimated annual cost	Ratio
Corp of Engineers:			
1945	$6,251,000	$5,745,000	1.05:1
1947	7,883,000	6,964,000	[1] 1.13:1
Investigative staff of House Appropriations Committee: 1950	2,843,000	10,597,000	.27:1

[1] An error in the constituents of this ratio of only 13 percent in the direction of overstatement of benefits or understatement of costs would destroy the economic justification of this project.

Mr. DONNELLY. The next document I have here is similar to the last one, but in much more detail in that it shows clearly that the committee staff based its estimates on field investigation and 1949 way bill study, a way bill study used by the engineers. Their 1945 estimates were based upon way bills of 1939. Since the committee investigated in 1950, it used the way bills of 1949 which were the most recent available for study.

These documents I have just handed the committee are the crux and the basis of all the hearings from this point on.

(The matter referred to is as follows:)

Potential tonnage of commodities which might move on Tombigbee waterway

Six principal commodities	Engineers' 1945 tonnage estimate					Engineers' 1947 estimate		Staff's [1] estimate (based on field investigation and 1949 waybill study)	
	Waybills 1939	Questionnaire	Mobile hearing	Preliminary total	Final 1945	Tons	Savings	Tons	Savings
Fertilizer	87,624	600	150,000	238,224	271,000	275,000	$740,000	5,000	$13,500
Bauxite	427,672	250,000		677,672	678,000	800,000	647,000		
Phosphate rock			250,000	250,000	250,000	400,000	563,000	300,000	422,200
Sugar	268,385	124,811	5,200	398,396	461,000	480,000	533,000	50,000	55,500
Gasoline	253,153	68,030	45,000	366,183	277,000	325,000	489,000	75,000	112,800
Alumina		253,410		253,410	253,000	253,000	144,000		
	1,036,834	696,851	450,200	2,183,885	2,190,000	2,533,000	3,116,000	430,000	604,000
Other commodities	1,184,923	272,048	164,052	1,621,023	1,809,000	2,030,000	3,267,000	870,000	1,396,000
Total	2,221,757	968,899	614,252	3,804,908	3,999,000	4,563,000	6,383,000	1,300,000	2,000,000
From Mississippi River					1,765,000	2,500,000	1,500,000	[2] 200,000	200,000
Grand total					[3] 5,764,000	7,063,000	7,883,000	1,500,000	[3] 2,200,000

[1] Investigative staff of House Appropriations Committee.
[2] 90 percent would be petroleum products for the upper Tennessee River.
[3] To translate the 1947 savings to 1949 basis the Engineers applied a ratio of 112 to 148 (1929=100). If this ratio is applied to savings on the new tonnage, the total benefits would increase to $2,843,000. The staff's ratio of benefit to cost is 0.27 (cost being greater than benefit). This is computed by using the savings or benefit figure of $2,843,000, and the Federal annual cost of $10,597,000.

Mr. DONNELLY. I would like, if I may, to invite the committee's attention again to a chart showing the types of commodities which move in inland waterways. It is dated August 1950, and it is entitled "Comparison of Internal Water-borne Commerce."

(The chart is printed earlier in the hearings.)

The committee members have seen this before. You will see that on the Mississippi River, for example, the great bulk of freight that moved was petroleum. You can see the long shadings there. That is true on the Gulf Intracoastal Waterway, and not quite as true on the Ohio River. However, on the Ohio River, you find coal and coke moving predominantly over other commodities and, in addition, you will find sand and gravel moving on the Ohio River, which I have heretofore characterized as construction aggregates.

WATER MOVEMENT SAVINGS ARE NOT PASSED ALONG TO THE CONSUMER

Now, getting into a question asked by one of the members of the committee with respect to whether or not industry passes along to the public any savings that they may enjoy as the result of the construction of inland waterways at the taxpayers' expense, let me again ask General Pick—and I do not mean to be repetitious—if the petroleum barges are not owned by the petroleum companies, by and large?

General PICK. Well, I think I answered that a while ago to the effect that I thought that was true, sir. I do not have any definite information on it.

Mr. DONNELLY. General Pick, I have here a document from the files of the Corps of Engineers dated April 16, 1945; Mobile, Ala. This is from Mr. C. N. Thompson, to Mr. E. E. Bottoms. Mr. Bottoms is here today, is he not?

General PICK. Yes, Mr. Bottoms is here.

Mr. DONNELLY. In this document, at page 3, we find this language:

> In view of the general knowledge of operations by the various petroleum interests it is difficult to understand the lack of interest. Only two small producers report. The major concerns brush the project aside without indicating opposition or favoring the construction. Perhaps it is because a certain traffic manager testified before a congressional committee not so long ago that his company did not undertake to pass the savings along to the public. In any event it is common knowledge that all the major oil companies (refiners) are using waterways very generally and for very great distances. Of course, many of them take advantage of their waterway potentialities to compel reductions in rail rates. This is true of several industries, such as coal and coke, as well as iron and steel and articles manufactured therefrom.

Now, as a matter of the economic cost-benefit ratio, General, we find that in the tonnage of commodities which would move on the proposed Tennessee-Tombigbee waterway an estimated savings, by the Corps of Engineers in the 1947 estimate for gasoline, of $489,000.

General, would you care to state whether this savings of $489,000 estimated by the Corps of Engineers in 1947 would be enjoyed by the petroleum companies themselves or whether those savings would be passed along to the ultimate consumer?

General PICK. Mr. Donnelly, I have not any idea. I do not know whether it would be passed along or not. I think the cost of gasoline is just about the same all over and I do not know whether the movement by one means or another has any effect on the price of gasoline. I do not know the answer to the question, sir.

Mr. DONNELLY. We have asked the Legislative Reference Service of the Library of Congress to investigate the statement made in Mr. Bottoms' memorandum of April 16, 1945, from which I have just read. We find that in the Interstate Commerce Commission proceedings held in Memphis, Tenn., on February 20, 1939, this subject was discussed. These excerpts are from the statements of Arthur M. Stephens, traffic manager, Standard Oil Co. of Kentucky, in hearings pursuant to Fourth Section Relief Application No. 17413 (gasoline and kerosene to Alabama) Memphis, Tenn., February 20, 1939.

Mr. FORD. May I ask one question there?

Mr. DONNELLY. Surely.

Mr. FORD. Was the reference made in Mr. Bottoms' memorandum in reference to the information you are now including in the record?

Mr. DONNELLY. Mr. Bottoms' memorandum, Congressman Ford, speaks of this:

> Perhaps it is because a certain traffic manager testified before a congressional committee not so long ago that his company did not undertake to pass the savings along to the public.

We asked the Library of Congress to run through the hearings and find out where that testimony occurred.

Mr. FORD. In other words, this testimony mentioned in Mr. Bottoms' memorandum is the testimony you are now going to bring forth from the Legislative Reference Service?

Mr. DONNELLY. Yes, sir.

Mr. KORTH. What are the respective dates of this letter you just read and the testimony before the ICC?

Mr. DONNELLY. Mr. Bottoms' memorandum is April 16, 1945, and the ICC testimony is February 20, 1939. I shall identify the questions for the committee, as we go along.

This is on page 264, question by Mr. Beck. Mr. Beck is Mr. J. C. Beck, representing Gulf Refining Co.

EXCERPTS FROM STATEMENT OF ARTHUR N. STEPHENS, TRAFFIC MANAGER, STANDARD OIL CO. OF KENTUCKY, IN HEARINGS PURSUANT TO FOURTH SECTION RELIEF APPLICATION NO. 17,413 (GASOLINE AND KEROSENE TO ALABAMA), MEMPHIS, TENN., FEBRUARY 20, 1939

Question (by Mr. Beck). Mr. Stephens, with regard to the possibility of imposition of tolls on these rivers, has that received the full consideration of your company in dealing with these matters? That is, do you view things like that for any particular time in future?

Answer (by Mr. Stephens). Oh, yes. We exercise our judgment and foresight in the consideration of all these matters. We have found that none of the other companies are passing any of this money on to the consuming public.

Now, as an instance in mind, I have before me at the present time a statement of the market price delivered to points in northern Georgia, to which you move gas out of Guntersville, for instance, at Dalton when you first began operation the market price at Dalton was 18 cents; that is the posted market on May 8, 1938. In December 1938 it was 17.5, reflecting a reduction in the refined market at Shreveport and the Gulf coast, and it represents a one-half cent reduction entirely in the tank price so far as dollars are concerned. In other words, Mr. Beck, we have not seen any passage of this savings to the consuming public. We have examined the markets at Dalton, Fort Payne, Cedar Bluff, etc., and we have not found that any of that has been passed on to the consumer.

Question (by Mr. Beck). And there are other cases though where you could find just the opposite conditions?

Answer (by Mr. Stephens). No; I have not. I have tried to but I cannot.

Then this occurred on page 266, a question by Mr. Hauseman. He is Mr. Henry Hauseman, representing Pure Oil Co.:

Question (by Mr. Hauseman). Mr. Stephens, your comment as to the barge operations of the Gulf Co., when you pointed out that the saving was not passed on to the public, would you say—what would you say the probability was in the event rail rates were reduced? Would that be passed on to the public?

Answer (by Mr. Stephens). Well, our market is determined on the rail rates. That is the only basis we use.

Question (by Mr. Hauseman). And that will be passed on to the public?

Answer (by Mr. Stephens). Yes; it will.

The next question is by Mr. Brent. Mr. Brent is Mr. Theodore Brent, representing the Mississippi Valley Association.

Question (by Mr. Brent). From 47 cents to 21 cents?

Answer (by Mr. Stephens). Of course, the general direction on the price of gallonage would be probably to 15 cents from 18 cents, but we are meeting a lot of competition from waterway operators, and we may be forced to go to the water terminals ourselves, against certain competition that may develop later on. I will state in that connection that I think the records will show this for the Kentucky company.

Question (by Mr. Brent). Was any modification of the price made at Paducah and Louisville when you started barging from Baton Rouge?

Answer (by Mr. Stephens). No; and I am going to tell you that we put the money in our pocket like everybody else did.

Mr. RABAUT. He was not very bashful about it; was he?

SAVINGS BY WATER MOVEMENT OF AUTOMOBILES NOT PASSED ALONG TO THE CONSUMER

Mr. DONNELLY. No. Now, a few days ago, there was a speech made on the floor of the House of Representatives with respect to the movement of automobiles by waterway as against the movement of automobiles in other ways. We find this statement in the Congressional Record of June 13, 1951, page 6662. I would like, if I may, to invite the committee's attention to a report from the Interstate Commerce Commission Docket 29820, *Chrysler Corporation et al.* v. *Akron, Canton and Youngstown Railroad Company et al.* (decided November 7, 1950, 279 I. C. C. 383).

* * * A brief description of the trade practices of the automobile manufacturers is important. Automobiles are generally sold at retail on the rail freight charges from the main factory to destination, plus another amount representing the dealers' costs of unloading, selling, and servicing the automobiles for delivery to customers. This basis ordinarily applies regardless of the mode of transportation used and of whether the automobile is produced at the main factory or at an assembly plant. Under those circumstances, the shipper benefits to the extent of the difference between the rail charges from the main plant and those actually paid. These savings may be used for various purposes, including dividends, advertising, reduced prices, or production of better automobiles at no increase in price.

General Motors sells its products f. o. b. destination. It controls the routing, selects the mode of transportation, and pays the freight charges to the carrier. In the sale of those of its products which are higher priced than Chevrolet, the interests and reasonable requests of its dealers in the matter of mode of transportation and routing are given consideration, if no particular inconvenience, delay, or extra cost is entailed. The same policies are followed by Ford. Irrespective of the mode of transportation used, and the plant from which the automobile is shipped, the rate charged by these companies against the ultimate purchaser of the automobile is the rail rate from the plant in the Michigan area to the destination at which the purchaser is located. The situation described is the same as existed at the time of the hearings in the general investigation.

General, would you care to make any comment on the excerpt I have just read with respect to automobiles?

General PICK. No, sir; I do not know anything about it. Do you want to make any statement on it, Mr. Faison?

Mr. FAISON. I would like to make a statement on the movement both of automobiles and gasoline. Mr. Chairman, it is our assumption that the savings made in the transportation of gasoline by water and the transportation of automobiles by water are eventually passed on to the ultimate consumer. I think members of the committee will realize that in any business as grimly competitive as the oil business and the automobile business, they could not pocket the savings and keep them if they wanted to. I do not doubt that they pocket as much as they can.

Mr. DONNELLY. May I say for the record that the speech on the floor of the House on June 13 to which I made reference was made by Congressman Rankin, of Mississippi.

At this point in the record, I would like to supply a summary of the issues which were pending in *Chrysler* v. *Akron, Canton and Youngstown Railroad Company et al.* (279 I. C. C. commencing at 377). The quotation was from page 383. I shall identify for the record the issues that were in that proceeding, as requested by Congressman Ford.

(The data referred to follows:)

The complaint was brought by Chrysler Corp. and other automobile manufacturers against the defendant and other railroads for violations of sections 1 and 3 of the Interstate Commerce Act. Complainants charged that defendants granted rail rates to General Motors Corp. and Ford Motors that were prejudicial to the complainants; that rates from manufacturing plants were unreasonable and prejudicial as compared with the rates from assembly plants; and that rail-rates for passengar cars in excess of 75 percent of first class were unreasonable.

AVAILABILITY OF RAILROADS, HIGHWAYS, AND PIPELINES IN THE TOMBIGBEE AREA

Now, with respect to petroleum, I would like to invite the committee's attention to a statement made by the Corps of Engineers with respect to the availability of pipelines in the area which would be served by the proposed Tennessee-Tombigbee project. This statement also covers railroads and highways.

The committee will note that with respect to railroads the roads servicing the area are named. With respect to highways the mileage of the State highway systems is given and the engineers' report that primary highways in the area are 99.03 percent surfaced.

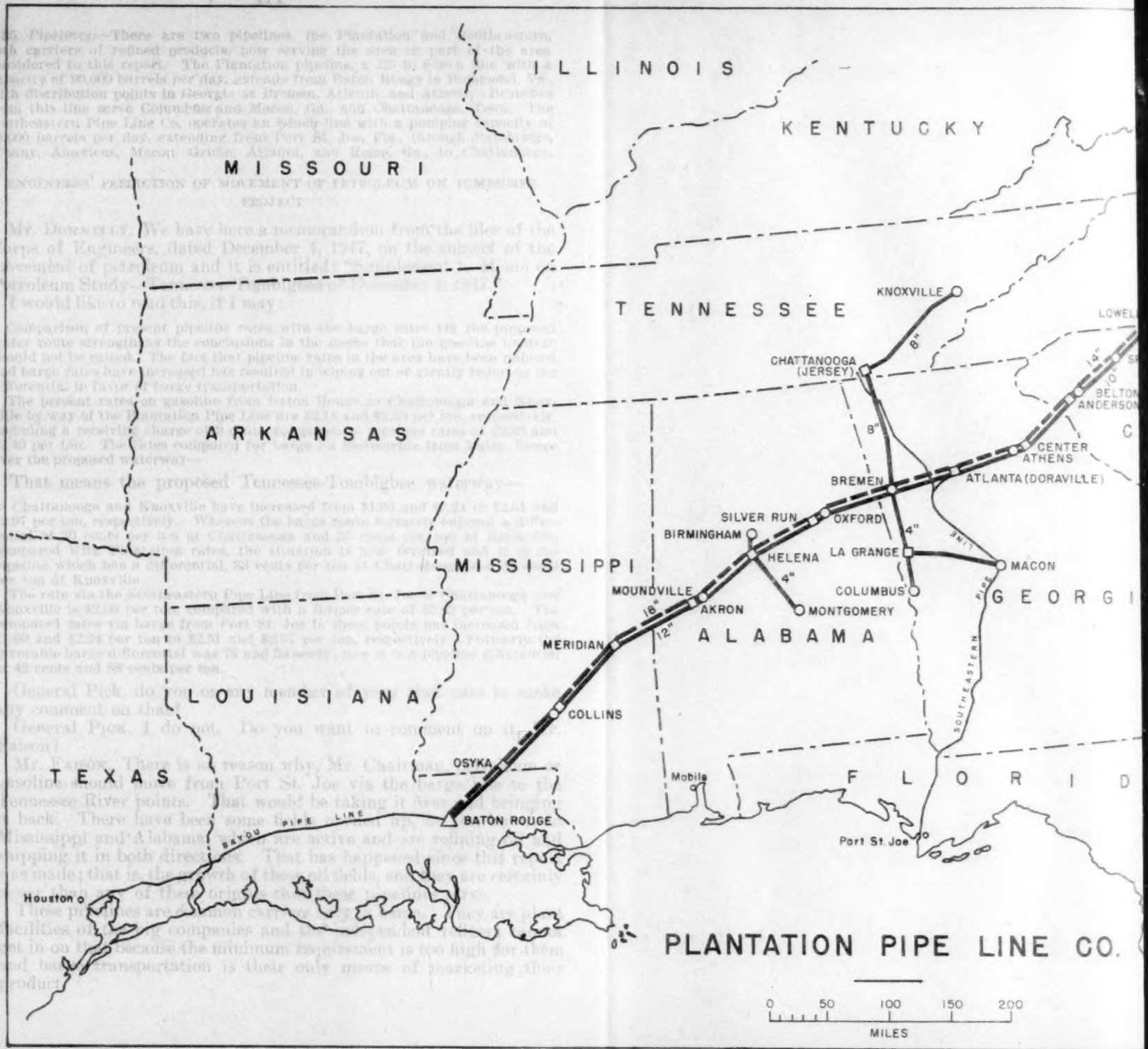
With respect to the pipelines, we have been able to secure a map showing the pipelines which service the area. I would like to put the map in the record at this point, the corps statement on railroads, highways, and pipelines, and a map of the pipelines in the area, dated September 26, 1950.

(The matter referred to is as follows:)

EXCERPT FROM HOUSE DOCUMENT NO. 486 (79TH CONG., 2D SESS.), 1945 REPORT OF CORPS OF ENGINEERS, RECOMMENDING PROPOSED TOMBIGBEE WATERWAY (P. 15)

33. *Railroads.*—The principal railroads through or into the territory adjacent to the proposed waterway are the following: The Southern Railway system, the Louisville & Nashville Railroad, the Illinois Central system, the Alabama, Tennessee & Northern Railroad, the Gulf, Mobile & Ohio Railroad, the Columbus & Greenville Railway, and the St. Louis-San Francisco Railway.

34. *Highways.*—A system of hard-surfaced roads connects the principal centers of the region, and good improved roads interlace practically the entire area. In 1940, the total mileage of State highway systems was 6,905 for Alabama, 6,276 for Mississippi, and 7,588 for Tennessee. Primary highways in the area are 99.03 percent surfaced.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CENTER
ATHENS
BREMEN
ATLANTA (DORAVILLE)
SILVER RUN
OXFORD
BIRMINGHAM
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LA GRANGE
LINE
HELENA
MACON
4"
MOUNDVILLE
COLUMBUS
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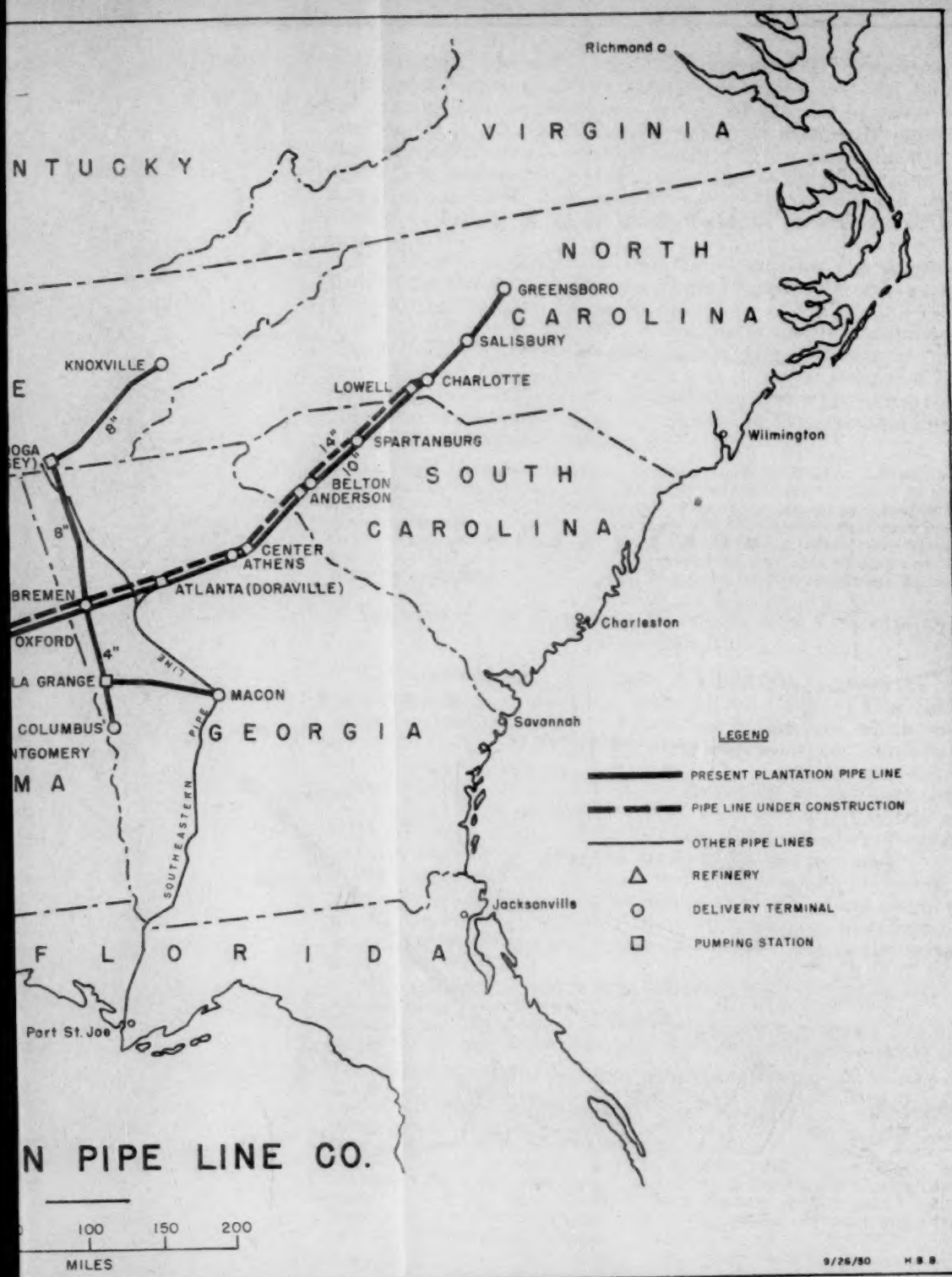
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BELTON
ANDERSON
SOUTH
CAROLINA
CENTER
ATHENS
ATLANTA (DORAVILLE)
BREMEN
OXFORD
LA GRANGE
MACON
COLUMBUS
GEORGIA
Savannah
Charleston
Jacksonville
FLORIDA
Port St. Joe
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PRESENT PLANTATION PIPE LINE
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OTHER PIPE LINES
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DELIVERY TERMINAL
PUMPING STATION
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H.B.B.

35. *Pipelines.*—There are two pipelines, the Plantation and Southeastern, both carriers of refined products, now serving the area or part of the area considered in this report. The Plantation pipeline, a 12- to 8-inch line with a capacity of 90,000 barrels per day, extends from Baton Rouge to Richmond, Va., with distribution points in Georgia at Bremen, Atlanta, and Athens. Branches from this line serve Columbus and Macon, Ga., and Chattanooga, Tenn. The Southeastern Pipe Line Co. operates an 8-inch line with a pumping capacity of 28,000 barrels per day, extending from Port St. Joe, Fla., through Bainbridge, Albany, Americus, Macon, Griffin, Atlanta, and Rome, Ga., to Chattanooga.

ENGINEERS' PREDICTION OF MOVEMENT OF PETROLEUM ON TOMBIGBEE PROJECT

Mr. DONNELLY. We have here a memorandum from the files of the Corps of Engineers, dated December 4, 1947, on the subject of the movement of petroleum and it is entitled: "Supplement to Memo on Petroleum Study—Tennessee-Tombigbee of December 1, 1947."

I would like to read this, if I may:

Comparison of present pipeline rates with the barge rates via the proposed water route strengthens the conclusions in the memo that the gasoline tonnage should not be raised. The fact that pipeline rates in the area have been reduced and barge rates have increased has resulted in wiping out or greatly reducing the differential in favor of barge transportation.

The present rates on gasoline from Baton Rouge to Chattanooga and Knoxville by way of the Plantation Pipe Line are $2.18 and $2.50 per ton, respectively, including a receiving charge of 9 cents, compared to previous rates of $2.20 and $2.49 per ton. The rates computed for barge lot movements from Baton Rouge over the proposed waterway—

That means the proposed Tennessee-Tombigbee waterway—

to Chattanooga and Knoxville have increased from $1.90 and $2.24 to $2.51 and $2.97 per ton, respectively. Whereas the barge route formerly enjoyed a differential of 30 cents per ton at Chattanooga and 25 cents per ton at Knoxville, compared with Plantation rates, the situation is now reversed and it is the pipeline which has a differential, 33 cents per ton at Chattanooga and 47 cents per ton at Knoxville.

The rate via the Southeastern Pipe Line from Port St. Joe to Chattanooga and Knoxville is $2.09 per ton, compared with a former rate of $2.63 per ton. The computed rates via barge from Port St. Joe to these points has increased from $1.90 and $2.24 per ton to $2.51 and $2.97 per ton, respectively. Formerly the favorable barge differential was 73 and 39 cents; now it is a pipeline differential of 42 cents and 88 cents per ton.

General Pick, do you or any member of your staff care to make any comment on that?

General PICK. I do not. Do you want to comment on it, Mr. Faison?

Mr. FAISON. There is no reason why, Mr. Chairman, petroleum or gasoline should move from Port St. Joe via the barge line to the Tennessee River points. That would be taking it over and bringing it back. There have been some fields opened up, as you know, in Mississippi and Alabama, which are active and are refining oil and shipping it in both directions. That has happened since this report was made; that is, the growth of these oil fields, and they are certainly closer than any of these origins that these pipelines serve.

These pipelines are common carriers only in name. They are plant facilities of the big companies and the independent refiners cannot get in on that because the minimum requirement is too high for them and barge transportation is their only means of marketing their product.

Mr. DONNELLY. Mr. Faison, we have here a letter signed by Mr. W. D. Ohle, traffic manager, Sinclair Refining Co., refiners of petroleum. The letter is dated December 19, 1950. It reads:

Mr. JAMES J. MALONEY,
Chief, Investigating Staff, Appropriation Committee,
House of Representatives, Washington, D. C.

DEAR SIR: Mr. Vechery, of your office, visited us a week or two ago and asked us if we could advise him as to how much tonnage this company would ship by water through a 9-foot waterway connecting the Tennessee and Tombigbee Rivers.

We would estimate that if this waterway was provided we would be able to ship 32,800 tons per year, at a total saving of $36,408, or $1.11 per ton. The freight would consist mostly of dry cargo (oil in drums, in cans, in cartons, etc.), and the balance would be bulk petroleum products.

We trust that this gives you the information you seek.

Then we have a letter from Shell Oil Co., signed W. B. Case, manager, marine transportation, addressed to Mr. J. J. Maloney, chief of the investigation staff. The letter is dated December 8, 1950. It reads:

DEAR MR. MALONEY: After Mr. Vechery's recent visit to this office we again looked into the possibility of Shell's use of the proposed waterway joining the Tombigbee and Tennessee Rivers.

Inasmuch as the territory reached by such a project is now being served by our own terminals on the Plantation pipeline, Mississippi and Cumberland Rivers, at rates which are undoubtedly lower than we could expect to enjoy on the proposed water route, we are unable to offer any data indicating a need for this particular project.

We are naturally interested in the general improvement of inland waterways and you will no doubt receive data from other companies which may be benefited materially.

If any further information is required from us, please advise.

Then we have a letter from Socony-Vacuum Oil Co., signed by A. G. Anderson, general traffic manager, dated December 7, 1950, addressed to Mr. Vechery of the investigative staff of this committee.

DEAR MR. VECHERY: This has reference to our discussion on your recent visit to this office concerning the possible use by Socony or its associated companies of the proposed Tombigbee River Canal connecting link with the Tennessee River.

Unless there is a substantial change in the future from our present marketing scheme in the area served by these rivers, which we do not anticipate at this time, it is unlikely that the proposed improvement will provide a means of saving in transportation expense to our company.

General Pick, I have covered the question whether or not the barges or bottoms of the petroleum industry are not generally owned by industry. May I ask you this question? Is it not a fact that there are very few common carriers on the inland waterways?

General PICK. They are barge-line companies as opposed to barge lines totally owned by the big oil companies and the big steel companies, and then there are some independent operators.

Mr. Faison, can you answer this question as to whether or not most of the shipping on the inland waterways is carried on by large companies that own their own floating plants as opposed to independent operators?

Mr. FAISON. The greatest bulk of the tonnage is transported by bottoms owned by industry, or by bottoms contracted for by industry and not under the control or regulation of the Commission. Most of the companies that are regulated by the Commission are common carriers, and there are quite a number of them. They are large com-

panies and they do a great deal of business. That is answering the first part of your question. There are quite a number. I have in mind some 37 barge companies that are common carriers.

Mr. DONNELLY. There are three kinds of barge operators, as I understand it. One would be the common carrier, which I understand to be in the extreme minority; one would be the industry-owned bottom, or barge, and the third would be the contract barge; is that correct?

Mr. FAISON. That is correct, as far as you have gone.

There are two categories of contract carriers—the carrier of regulated traffic, or general cargo, and the other is the unregulated traffic of one bulk commodity. As far as the value of the cargo is concerned, the preponderance is carried by regulated carriers, but as far as the tonnage is concerned, it is carried in industry-owned bottoms.

EMBARGO ON LESS-THAN-BARGELOAD SHIPMENTS

Mr. DONNELLY. Mr. Faison, are you familiar with the embargo that was declared on less-than-bargeload shipments by the big barge operators on the Tennessee River a year or so ago?

Mr. FAISON. I am not familiar with the particular embargo that you speak of. I do know from talking with people, managers of the companies, they do not want to carry package freight, less-than-carload freight.

PREDICTED TONNAGE OF SUGAR ON PROPOSED TOMBIGBEE

Mr. DONNELLY. That, Mr. Faison, gets us into the commodity labeled "sugar," and the Corps of Engineers estimated in 1947 there would be a movement of 480,000 tons on the proposed Tennessee-Tombigbee waterway with a saving of $533,000. I stated the premise. Now, let me ask you the question: Is it not a fact, Mr. Faison, that sugar generally moves in 100-pound bags, or cartons?

Mr. FAISON. I think that is true.

Mr. DONNELLY. Is it not a fact it is not feasible for sugar to move by barge?

Mr. FAISON. On the contrary, it is very feasible.

Mr. DONNELLY. It is?

Mr. FAISON. It is.

Mr. DONNELLY. Did the engineers have any data which will support that statement?

Mr. FAISON. It did move in considerable quantities at the beginning of the inland waterways service because of the advantage of lower rates to offset the slower service, but the competitors of the water carriers got the Interstate Commerce Commission to withdraw the lower rates, to refuse to let the barge lines keep these lower rates, and so the sugar traffic diminished. On the other hand, right now it is increasing. I think there is considerable sugar traffic on the canalized part of the upper Mississippi now, and it was larger last year than it was the year before. There is no reason why it cannot be carried safely in double-skinned barges that can be sealed off, with just as much protection as there would be in a freight car. It is the rates. That is the thing we are anticipating, that the inequalities in the regulation of rates are going to be cured to let the public get the advantage of these low rates.

The sugar refiners themselves have joined with the railroads in trying to keep the barge lines from putting in low rates. I have sat in the hearings and heard them do it, and because of the arrangement—and this is my explanation—they want to keep a certain level of price at the receiving end, Chicago, Cincinnati, and places like that, and they do not want the establishment—and I am assuming now; I do not know this—of refineries at Mobile that can get the sugar into the North cheaper than they can and upset the price. We have to figure those things because when we interview these people we cannot go out and take everything they tell us. It is their pocketbooks that are talking, we find, and we have to use our judgment.

Mr. DONNELLY. Mr. Faison, is not the movement of sugar from the Louisiana area, where there are refineries, primarily a through movement to the Chicago market?

Mr. FAISON. More goes there than to any other one destination that I know of.

Mr. DONNELLY. The staff of the committee interviewed large sugar users for the purpose of getting basic facts with respect to the movement of sugar, and we have here a statement made by the Brock Candy Co., at Chicago, by Thomas P. Frasier, traffic manager.

The Brock Candy Co. is the largest purchaser of sugar in the Tennessee Valley area. This company purchases an average of 3,000 bags (100 pounds each) each week during the last 6 months of each year. The purchases during the first 6 months are about one-half of that quantity.

The company has its choice of purchasing its sugar from the Savannah Sugar Refinery, at Savannah, Ga., or the refineries in Louisiana. Most of its purchases are from Godchaux Sugars, Inc., and J. Aron & Co., both of New Orleans.

Mr. Frasier explained that the rail rate from Savannah, Ga., is 39 cents per 100 pounds as compared to a rate of 43 and 48 cents from Louisiana refineries (the rate from Reserve, La., is 43 cents and from Supreme, La., 48 cents).

The Louisiana refineries absorb the difference in rail cost and bill the Brock Candy Co. on the basis of the rail rate from Savannah, Ga., to Chattanooga. Mr. Frasier stated his company is not in favor of barge transportation in connection with shipments of sugar to its Chattanooga plant because of the time in transit and the fact there is more damage and loss when shipments move by water. He added that there is always less claims against the carrier when the shipments move by rail than when shipments are made by barge. Furthermore, there is a certain amount of moisture absorbed when sugar moves by water. This causes the sugar to get hard. He stated it, of course, would not affect the use of the sugar by his company but it would when shipments are consigned to a jobber for redistribution.

Mr. Frasier mentioned that the Ragland-Potter Co., Nashville, Tenn., which company is the largest wholesale grocer in the Tennessee Valley, had purchased sugar in barge-load quantities of 100,000 bags for movement by water at a savings in cost of 4 to 5 cents per bag. The Savannah refinery thereupon reduced its price in order to meet the barge rate with the result that the company no longer has an interest in transportation by water.

Mr. Frasier, in conclusion, stated his company would prefer receiving carload shipments daily rather than ordering sugar in bargeload quantities for shipment at less frequent intervals. He mentioned that the sugar refineries have a four-payment plan requiring the payment of sugar in four equal installments, at the tenth, seventeenth, twenty-fourth, and thirty-first days after arrival of the sugar, or 2 percent discount if payment is made in full 20 days after the arrival of the sugar.

Would you care to comment on that, Mr. Faison?

Mr. FAISON. Mr. Chairman, the comment I have is rather general. We have been told these things for 15 years, the reasons why these commodities will not travel by barge, but we observe that they do travel by barge in increasing quantity. We are governed by what happens rather than the theory that they tell us about.

On the Mississippi River in 1948 there were 119,717 tons of sugar upbound. In 1949 there were 334,426 tons upbound, almost two and a half times as much.

Mr. DONNELLY. Now, with respect to the movement of sugar on the Mississippi River, the Ohio River, and the Gulf Intracoastal Waterway, we can refer again to the chart which you looked at before. We found the legend for sugar appears only under the Mississippi River. It is the cross-legend. We find a movement in 1940 and 1941. There is none in 1942, 1943, 1944, 1945, 1946, 1947, 1948, and in 1949 we find a movement of 300,000 tons on the Mississippi River of sugar.

Mr. KORTH. Did you say that there was none in 1948?

Mr. DONNELLY. These figures show none. These were compiled by the Corps of Engineers, United States Army, in August of 1950.

Mr. KORTH. We are having them checked right now, but according to the memorandum we have here it does show that in 1948 there were 119,717 tons. There may be an error either in the information we gave you, or in the information that I have just given, but we will ascertain the accuracy of the statement.

Mr. DONNELLY. Of course, it will go to the accuracy of the chart.

Mr. KORTH. I understand. There was an error made someplace or the other.

General PICK. I would like to point out that during the period of the chart, sugar was one of the great scarcities in this country, during the war, and so was floating equipment, and all of the floating equipment was being used to haul military tonnage. It would be very interesting to find out what happened to that Louisiana sugar, whether it was moved west, or distributed in another direction during that time, but I think it was caused by the war. That is rather interesting to me.

Mr. DONNELLY. I understand.

In the table which the Congressmen find before them we find the engineers used the waybills of 1939. This is on movement by rail in 1939. Then they made computations on the basis of those waybills of 1939, a questionnaire, and a hearing held at Mobile. Since there was no movement of sugar by water for most of the years immediately prior to the engineers' computations in 1945, and the engineers' computations in 1947, you get into what General Pick described at the outset—the credibility of the judgment of the investigative staff of the committee and the judgment of the Corps of Engineers with respect to a forecast of whether sugar would move on the proposed Tennessee-Tombigbee waterway. That is the relevancy of this material here.

Mr. FAISON. I think I already said in our assumption of this tonnage, we are assuming the tonnage for the future of the waterway, not what traveled in any of these particular war years. We think that the rate situation is not in the interest of the public as it is now, and we see signs it is going to be changed so that the shippers can get the advantage of water transportation. That is the basis of the assumption in our estimate all the way through that report. Where there are inequalities and where the barge lines are not permitted to put in rates to reflect the economy of their service, that will be changed. We are looking not to 1949 but to 1989, and on up through the useful life of this project.

We think that rates are going to be related to the costs so the economical barge service will be available to the public.

Mr. DONNELLY. Mr. Faison, you put your finger on the very heart of the engineers' computation.

ENGINEERS' USE OF RAIL RATES

Now, so the committee will fully understand—and this is vital; it goes into all the calculations—did you in comparing your savings to be achieved by barge over the proposed waterway, over and against rail rates, use existing rail rates, or did you use some higher rail rate which is not in existence but which you think the rate should be increased to?

Mr. FAISON. We used the rates that were in existence in 1939 and the barge line rates which were constructed on a barge line cost basis in 1939, because in 1945 we were in the middle of the war. We did not think any of the situation then was normal, and we thought it would probably level out after the war, so we used 1939 as the last available normal year and we compared rates and barge costs as of 1939. There were no changes in rail rates, I might say, between 1939 and 1946, except occasionally certain individual rates. The rail costs were going up but they had not gotten their increase until after this report was made.

Mr. DONNELLY. Mr. Faison, after you made your report in 1945 the engineers resurveyed the situation in 1947, and at that time there had been some variation in rail rates; had there not?

Mr. FAISON. That is right.

Mr. DONNELLY. When you speak of rail costs, that is an entirely different thing from rail rates; is that not so?

Mr. FAISON. Right.

Mr. DONNELLY. Does the Corps of Engineers feel the present existing railroad rates in this area are arbitrarily low?

Mr. FAISON. I do not know about the rates at present in the valley. I do not know what they are. We are undertaking a study, if we get the funds, to investigate that.

Mr. DONNELLY. When you made your recomputations in 1947, shown on this chart before each of the committee members, is it not a fact you did not use the actual rail rates but instead used a concept which you regarded as a normal competitive rail rate?

Mr. FAISON. Mr. Chairman, the man who made that 1947 detailed study has just told me that we used the rates as they were in 1947, and also the barge costs as they were in 1947.

Mr. DONNELLY. The actual existing rail rates?

Mr. FAISON. I would like to put him on the stand.

Mr. DONNELY. I have a note here that the committee would like to recess until 2 o'clock.

General PICK. Mr. Malone is the one to testify.

Mr. KERR. The committee will stand adjourned until 2 o'clock.

AFTERNOON SESSION, 2 P. M.

Mr. KERR. The committee will come to order.

WATER MOVEMENT OF SUGAR

Mr. KORTH. In connection with the chart which has been previously introduced here showing the net sugar tonnage in 1948, that was pre-

pared by the Mississippi Valley Gulf Coast Regional Statistical Office. While it is true that is part of the Corps of Enginners' operations, at the same time the 1949 report of the Chief of Engineers shows that there were 119,717 tons of sugar carried by water, by barge. We prefer to stand upon these official figures here. This being a subordinate office we cannot rely upon the sugar tonnage in this instance.

Mr. KERR. Do you want to make that correction, then?

Mr. KORTH. That is correct. I just wanted the record to reflect the thing accurately.

Mr. DONNELLY. May I ask you, Mr. Korth, as to that figure of one-hundred-and-nineteen-thousand-odd tons of sugar, if you can tell us which waterway that moved on, because sugar in the chart is limited to Mississippi River traffic only.

Mr. KORTH. This is a report on the Mississippi River showing the tonnage carried on the Mississippi River from Minneapolis, Minn., to Mouth of Passes—domestic commerce.

Mr. DONNELLY. General, did you want to make some further comment with respect to the chart which you have in your hand?

General PICK. We just cannot find this, and do not know how to check it up. Maybe if I could say this off the record it would be all right.

(Discussion off the record.)

Mr. RABAUT. All right; back on the record.

BARGES ARE PREDOMINANTLY INDUSTRY OWNED

Mr. DONNELLY. Now, the pending question was one dealing with rail rates. May I at this time, however, again refer to the status of the various barges—that is, industrial—against common carrier and against contract?

During the recess the committee staff checked the number of barges, or classification of the barges, operating on the inland waterways, the Mississippi River system and the Gulf Intracoastal Waterway for the year 1950, and we found that they are all listed alphabetically—all of the barge operations. We found that there are 39 common carriers, 12 contract carriers, and 724 carriers defined as exempt, which means they were industrially owned, and bulk carriers or bulk carriers under contract to an industry. So, we get the figures of 724 either industrially owned or under contract to an industry in bulk, 12 contract carriers, and 39 common carriers, and the source of that came from a document of the Corps of Engineers entitled "Tranportation Lines on the Mississippi River system and the Gulf Intracoastal Waterway, 1950, Transportation Series 4, Corps of Engineers, Department of the Army."

General PICK. Could Mr. Faison comment on that, please?

Mr. DONNELLY. Yes, surely.

Mr. FAISON. Mr. Chairman, he has listed common carriers and the contract carriers under the regulation of the Commission, and he has thrown all of the other carriers in the industrially owned classification into the kinds of carriers on the inland waterways that operate not under Interstate Commerce Commission control, which means that they do not carry more than three bulk commodities in any one tow.

Most of those are private carriers who operate on their own, and they do not ever have to report to the Commission since they do not carry more than three bulk commodities in one tow ordinarily.

Mr. KERR. Those that own the carriers do not report what they carry?

Mr. FAISON. They give very detailed reports of their operations to us. We have their ton-miles and the movements of their barges and all, but they do not report to the Interstate Commerce Commission as commercial carriers under rate control.

Mr. KERR. I think we understand.

Mr. DONNELLY. Then the conclusion is correct, is it not, that the 724 are not common carriers?

Mr. FAISON. That is right.

Mr. FORD. Mr. Donnelly, I am not entirely clear on one point, and maybe on several points. Are those categories you read companies, or units, or what are they?

Mr. DONNELLY. They have an alphabetical list of all of the companies, and then there is a legend there (*a*), (*b*), and (*c*); (*c*) are those that do not report to the Commission and, therefore, are not common carriers.

Mr. FORD. Do you mean companies or individual barge operators?

Mr. DONNELLY Companies.

Mr. FORD. Companies?

Mr. DONNELLY. Yes, sir; and then you count those that are in this legend off one by one, and get the number 724.

I think in order to state a preface for the next line of interrogation which we commenced before lunch, Mr. Malone, as I understand it, has some statement he wants to make.

RAIL RATES USED IN ENGINEERS' COMPUTATIONS

I think I ought to invite the committee's attention to the statement of the Corps of Engineers with respect to rail rates, as to whether they are depressed at the present time, in the opinion of the Corps of Engineers, and we have in the formal answer of the Corps of Engineers dated April 23, 1951, to the committee some statements on the matter of rail rates. I would like to read from paragraph 10 of that.

Mr. KERR. Will you identify that as being a statement of the engineers?

Mr. DONNELLY. Yes, sir; it is their formal statement to the committee.

Mr. KERR. All right.

Mr. DONNELLY (reading):

> One of the severest strictures of the Corps of Engineers' procedure criticized was the computation of savings as the difference between normally compensatory rail rates and barge costs applied to that portion of prospective traffic which was to be diverted from rail. The investigative staff claimed that the Corps of Engineers should have recognized the propensity of the railroads to cut their rates on the commodities involved when faced with water competition. The suggested procedure not only cuts down the unit saving but also the tonnage which would be expected to seek the waterway to take advantage of the saving.

Here is the crux of it:

> The procedure adopted by the Corps of Engineers was in recognition of the public demand for the abolition of destructive rate-cutting practices, the pressure from such Federal agencies as the Department of Commerce and Agriculture, the Inter-Agency Basin Committees, and the President's Water Resources Policy Commission for relating rates more closely to cost of service and the trend in regulatory policy to recognize the interests of the carriers as well as the public in more equitable protection of the economies inherent in each mode

of transportation. The Corps of Engineers bases its forecasts of future waterway performance on the assumption that regulatory policy or legislation will bring under control the practices that are clearly detrimental to the public interest.

Now, General Pick, may I ask you, or some member of your staff, whether the language I have just read means that the Corps of Engineers feels that rail rates in the area that would be served by this proposed project are presently too low?

General PICK. Mr. Donnelly, I would like to ask Mr. Faison, who is our economist, to answer that.

Mr. FAISON. Mr. Chairman, we did not assume that the rates of the railroads as they exist should be raised because of what we expect improvements in regulations to bring about. We took the rates as they are in this area, and as I understand what the investigative staff wishes us to do is to recognize as soon as we put in this waterway that the railroads will cut their rates from the levels that they are now to meet water competition and will, therefore, defeat the purpose of this waterway, and we do not think that is in the interests of the public, and we do not assume that that would occur in the future, or that it would be permitted by the Interstate Commerce Commission and the regulatory commissions to take place. We took the rates as they were in 1947, and we were figuring the savings that could be made under them if this waterway were provided. The only reason why I brought in that statement before noon—that we expected the rate situation to be improved, and we thought we saw by the Interstate Commerce Commission's decisions that they recognize that they should be brought into line with the relative costs of service—was that in the future the rating spread would be so great between waterways and railroads that this tonnage, that we assume, would be attracted to the waterway despite these devices that the competitors resort to now to withhold adapted traffic from the waterways.

Do I make myself clear, Mr. Chairman, on that? We did not assume any future rates. We took the rates as they were, but we do think that the trend of regulation is toward protection of the public in their rights to use the economies that are going to be afforded.

Mr. DONNELLY. Again, referring to the formal report in paragraph 9, we find this language:

> Sugar, coffee, molasses, aluminum ore, sisal, to name but five commodities, were imported into New Orleans in 1948 in volume of over 2½ million tons, much of it destined for points north of the Tennessee-Tombigbee divide. Once destructive rate-cutting practices have been abolished, there is no reason why these and similar commodities of the future, such as iron ore for the steel mills of Granite City, Ill.; Gary, Ind.; and Ashland, Ky., would not be imported directly through the excellent docks at Mobile, and thence by the shorter and more direct slack-water route to points such as Cincinnati, Louisville, Ashland, Evansville, St. Louis, Chicago, and the Twin Cities, at the substantial savings in transportation charges estimated in the Corps of Engineers' report.

Now, may I ask the question categorically, Mr. Faison, as to whether the computations which the Commission has in the table entitled "Potential Tonnage of Commodities Which Might Move on Tombigbee Waterway," as to whether the estimated tonnages in this table are based upon actual rail rates as they existed or are they based upon the theory that the rail rates should be higher?

Mr. FAISON. I must qualify that answer in this respect: The savings in cents per ton-mile are based on the existing rates as they were when that revision was made.

The fact that this tonnage and more tonnage will seek the waterway is based on the presumption that eventually the rates will be related to the cost of these methods of transportation, so that the volume of tonnage that can properly be carried economically by the waterways will be so carried. We are not talking about the existing rates. We are talking about the practice of railroads reducing rates after the Government has provided the waterways.

May I just read something from the late Chairman of the Interstate Commerce Commission, Mr. Joseph Eastman, who is recognized by every one of us as an authority on these things? I will introduce this from the volume. He says that no sooner is the waterway opened to navigation than the competitive carriers reduce their rates. They prevent the traffic from seeking the waterways. If the traffic that is thus withheld from the waterways were taken into consideration, the savings would be very much greater than they are if you merely consider the traffic that seeks the waterways under this competitive practice; and I will read you another passage from Mr. Joseph Eastman where he says he thinks that is wrong. May I introduce his words as to that?

Mr. KERR. Yes.

Mr. DONNELLY. If you will, mark it and give it to the reporter.

(The matter referred to is as follows:)

QUOTATIONS FROM JOSEPH B. EASTMAN, LATE CHAIRMAN, INTERSTATE COMMERCE COMMISSION

Public Aids to Transportation, volume 1. Federal Coordinator of Transportation (Mr. Joseph B. Eastman, late Chairman, Interstate Commerce Commission), United States Government Printing Office, 1940, foreword, page vi: "* * * They (the proponents of the waterways) point out that, when such a waterway is opened and water carriers begin to use it, immediately competing modes of transportation, particularly the railroads, reduce their rates, thus depriving the waterway of traffic that it would otherwise carry. They urge, therefore, that in estimating unit costs of transportation on the waterways the volume of traffic which they would carry in the absence of such competitive reductions in rates ought to be taken into consideration, rather than the traffic which is actually carried.

"It is true that the results of the construction or improvement of waterways are as they describe. Reductions in rates are made by competing modes of transportation, and the waterways are thus deprived of traffic which they would otherwise carry. * * *"

Address of Joseph B. Eastman, late Chairman of Interstate Commerce Commission, before the National Industrial Traffic League, Chicago, April 28, 1938: "The minute a waterway is constructed and the water carriers begin to inaugurate low rates, then the railroads reduce their rates. The public gets the benefit of those reductions, but the waterway does not get the benefit of that traffic; and, if you included all of the traffic on all the reduced rates for which waterways were responsible, there would be a very different showing."

Interstate Commerce Commission Report, volume 223, page 739: "Such a plan of making rates for noncompetitive traffic is, it is hardly necessary to say, open to abuse. It may be used, for example, at the expense of (competitive) traffic, for the purpose of maintaining an unfair and destructive warfare with competitors who are not fortunate enough to possess such a reserve of exclusive business. Moreover, it is not wholly clear that the present proposal of applicants (railroads) is free from all elements of such abuse. * * *"

Interstate Commerce Commission Report, volume 194, page 46; Eastman, Commissioner, concurring: "* * * I am much inclined to believe that a system of rates for all of the agencies based on cost plus a reasonable profit under normal traffic conditions would allow them all to perform their appropriate functions and, in the end, be better for all concerned, including the country and its industries, than any system of competitive rates. * * *"

General PICK. Mr. Donnelly, I would just like to say this: The statement made in paragraph 9, about sugar, molasses, and stuff like that, is our estimate. That is an estimate that was made, and we claim it is just an estimate. That is all.

Mr. DONNELLY. I see.

COMPUTATION OF PREDICTED SAVINGS BY SHIPMENTS ON WATERWAYS

General Pick, this is a major matter with respect to not only this proposed waterway but all American waterways. I would like to invite your attention to the report of the President's Water Resources Policy Commission, dated 1950, entitled "A Water Policy for the American People."

Now, General Pick, I will hand you, so you may follow it, an extract from the report which I have just identified. You will find the material here [indicating].

General PICK. Paragraph 8?

Mr. DONNELLY. Yes.

General PICK. I have read it, Mr. Donnelly.

Mr. DONNELLY. And we have all read it, and I would like to insert paragraph 8 on page 422 of the document I have identified in the record, since everyone, including the committee, has read it. Following that, I would like to ask you a few questions.

(The matter referred to is as follows:)

8. *Transportation benefits*—(a) *Method of analysis.*—In order to obtain a reasonable estimate of transportation savings which obtained on the 15 waterways during the 20-year period, analysis was made of the principal commodities conveyed and of representative cargo movements, as well as of rail rates and waterway costs applicable to such commodities and movements. Fluctuations in rail- and truck-rate levels and in barge- and pipe-line service cost levels during the period under analysis were established from the comprehensive files of the Board of Engineers for Rivers and Harbors; and the difference between the water-transportation charges and those that would have applied by the cheapest alternative means were developed as unit savings per ton-mile of water route. Full barge-line service costs plus reasonable profit were used for comparison in place of common-carrier tariff rates because the great preponderance of the barge-borne freight is known to have moved by contract and industry-owned carrier services. The unit savings thus derived were applied to the estimated ton-mileages of the various commodities for each of the selected waterways for each year of the period, and the results are given as annual transportation savings in summary form in table 1. In view of the time requirements, it was not attempted to establish the average length of haul of each of the principal commodity movements by actual computation, but such averages were estimated in accordance with the knowledge and judgment of the Board's experienced staff of water-transportation analysts.

The estimates of savings differ from various published analyses of waterway transportation principally in the use of normal competitive rates for comparison, rather than rates already depressed to meet waterway competition as giving a truer measure of savings to the public. This study involved analysis of more than 800 normal and "water-compelled" rates on representative movements throughout the period. Every effort was made to present a fair and conservative estimate of savings. Rafted freight, for example, was disregarded in computing savings, as deriving no benefit from channel improvements; and water movements believed to originate or terminate at off-river points were penalized for circuity and by including ample charges for the extra terminal handling and switching required. A detailed study to obtain the exact savings which have resulted from these waterways would require much more time than has been available for this analysis, and would be very difficult because of lack of detailed and comparable records for the early years. It is believed, however, that this analysis, though concededly approximate in nature, gives a fair general picture of the economic value of the waterway program.

(b) *Savings.*—As indicated in table 1, there has been a considerable variation in unit savings per ton-mile between the various waterways, ranging from 4.6 mills per ton-mile for the Illinois waterway, which results largely from the movement of coal, to 19.5 mills per ton-mile on the Sacramento River, where petroleum products constitute the largest item in the tonnage movement. Average unit savings are shown in table 1 only to indicate the magnitude of unit savings in a general way. They are composite figures based on many specific cargo movements. The average annual savings shown, however, are a good index of the value of each of the waterways.

Mr. DONNELLY. The first question is that the Corps of Engineers has participated in the work of the President's Water Resources Policy Commission; has it not?

General PICK. I had one man detailed as liaison with the Commission. I had two or three other people collecting and assembling some data for them with one man that was assigned over there to work with them as a liaison representative of the Corps of Engineers; yes, sir.

Mr. DONNELLY. Let me ask you this question: Is the Corps of Engineers responsible in any sense for the statement in this paragraph 8 or any of the statements?

General PICK. I have no way of knowing, sir. I will ask Mr. Faison if we, in any way, are responsible for this statement?

Mr. FAISON. We contributed to the computation of the benefits. The Office of the Chief of Engineers contributed to the computation of the annual charges, and as far as the computations of the benefits are concerned I think we are prepared to answer for the general approximate accuracy of them, I will say this, within 10 percent.

General PICK. May I ask him another question? Did we write this?

Mr. FAISON. No, sir.

General PICK. Is this in general what we do?

Mr. FAISON. Let me read that.

General PICK. Is this our language; is this generally what we do?

Mr. FAISON. This is in general what we do.

General PICK. That is all Mr. Donnelly is asking, I think, is it not?

Mr. DONNELLY. The question I would like to ask is this: You said you did not write the language in paragraph 8, but does that embody a statement of the procedures used by the Corps of Engineers in computing transportation benefits?

Mr. FAISON. It certainly does not, for this reason, if I might explain. We were called on by the Water Resources Policy Commission to give our best answer within, as I remember it, 2 weeks——

General PICK. That is all right; go on.

Mr. FAISON. But in making a report to the Appropriations Committee or the Public Works Committee we go into every detail for months. As your economist or anybody else could tell you if it was done, meticulously done, it would take months, and we did not take months to make this report, but we gave them the best approximation that we could with our knowledge and experience within the time limit, and I think—I am going to state this on my own responsibility—that I think we were within 10 percent of the right answer.

Mr. DONNELLY. Now you are speaking in terms of quantities, are you not?

Mr. FAISON. That is right.

Mr. DONNELLY. Let use get to procedure. We have here this language:

The estimates of savings differ from various published analyses of waterway transportation principally in the use of normal competitive rates for comparison, rather than rates already depressed to meet waterway competition, as giving a truer measure of savings to the public. This study involved analysis of more than 800 normal and "water-compelled" rates on representative movements throughout the period.

Mr. FAISON. Yes, I can answer that.

Mr. DONNELLY. Does that represent or embody the procedure that the Corps of Engineers used in estimating the benefits of the proposed Tombigbee project?

Mr. FAISON. It does not.

Mr. DONNELLY. It does not?

Mr. FAISON. No.

Mr. DONNELLY. All right, sir.

Does it represent the procedure used by the Corps of Engineers in estimating transportation benefits on any project before the Congress?

Mr. FAISON. So far as I know it does not, but may I state what the difference is, that, simply, we were talking here about projects that were already constructed and in operation, and our reports to the committee are talking about projects not yet constructed, so that the rate structure has not yet been subjected to this practice of competitive carriers of reducing the rates, but here we were asked "How much have you saved by the construction of such and such a project that is now in operation?" We said, "Well, if it were not constructed the rates of the railroads would be at a normal level," so that what we would have accomplished would be the difference between what the shippers would have to pay if we had not gone in there as against what they are paying now on the waterway.

So, we used our normal rail rate basis instead of this, but in presenting a project to Congress of a new unconstructed waterway, we use the situation as it is, the rate situation as it is which is altogether different from this. The committee does not ask us how much we will save by an existing waterway. They ask us how much we are going to save by devolping a new waterway, and we take the situation as it is and then measure the savings against the situation as it will be.

Mr. DONNELLY. By "situation as it is" you are speaking about the rail rates?

Mr. FAISON. As they stand.

COMPUTATION OF PREDICTED WATER RATES

Mr. DONNELLY. As far as the waterway rates on the proposed project are concerned they do not exist, and so the Corps of Engineers then computes what they may be?

Mr. FAISON. Did you say the water rates do not exist?

Mr. DONNELLY. They do not exist.

Mr. FAISON. So we compute a system of rates on which the water carriers could operate with reasonable profits, to assure them a reasonable profit by what carriers are making now, a percentage of return over and above their investment, but we do take the situation as it is.

Mr. DONNELLY. And that is represented, this latter method you speak of in this table which I hand you, showing the engineers' com-

putations of the potential tonnage which might move by the Tombigbee waterway?

Mr. FAISON. May I refer that to the people who were directly engaged in making these? I can answer it, but they are better qualified to answer than I am to answer it.

Mr. DONNELLY. May I ask you this: Did they do their work under your supervision and direction?

Mr. FAISON. They did.

Mr. DONNELLY. And you are the economist in charge of computing the transportation benefits?

Mr. FAISON. I am in charge, yes.

Mr. DONNELLY. Now, the question I have asked you is simply a matter of administrative procedure, in the computations which were made under your direction or supervision, was the system used of taking the actual rail rates in existence today as against waterway costs which you computed since they did not exist?

Mr. FAISON. No, that is not the waterway cost. You have used that term many times, counsel has used that term over and over again. We are comparing that with a system of water carrier rates, we are putting in rail rates against water carrier rates, not water carrier costs. We know what the water carrier costs are; we are in constant touch with them, but we have added a profit in addition to their interest and amortization of equipment, and everything and set up a system of rates by which they could operate profitably. That is the only thing we could do where there is no waterway existing. There are no water rates on the Tennessee-Tombigbee; there is no Tennessee-Tombigbee yet.

Colonel POTTER. May I boil that down by an example? For justification we use rates as they exist for the benefits to the project after it is built. In many cases the railroads have reduced their rates to meet that competition. We use that to calculate our benefit rates as they existed before. As an example I have been told, although I have not checked it myself, that the rates for hauling grain from Buffalo to New York are lower in the summertime when the Erie Canal is in operation, than they are in the wintertime when the Erie Canal is frozen up and not in operation. Our benefits on that project would be on the basis that the same rates were charged all of the year around.

Mr. RABAUT. The higher rate?

Colonel POTTER. Yes, sir, and which is true the railroad feels they should get for carrying that commodity.

Mr. DONNELLY. A portion of the year?

Colonel POTTER. To meet competition.

Mr. DONNELLY. Mr. Faison, directly on the matter that we have just been discussing, so that there is no confusion as to terms, you said that I, as counsel, had misunderstood you; that I had repeatedly used the word "costs" as defined in water movements.

Mr. FAISON. I am sorry, I did not mean that you as counsel did that, but that the report of the investigative committee did that. May I retract that, Mr. Chairman?

Mr. DONNELLY. Just so the matter is clarified, I have here the formal report of the Corps of Engineers dated April 23, 1951, and I read from paragraph 11:

> Actually costs were not compared with rates as alleged by the investigative staff. The principal prospective commodities do not move as a rule on barge-line

tariff rates but in barge lots on contract agreements or in industry-owned bottoms, and there were obviously no tariffs covering transportation via the Tennessee-Tombigbee route. Prospective water carrier charges per ton were built up from broad, long-term records of barge line and river terminal operations, supplemented and verified by studies of specific operations in the particular areas involved. They resulted in the construction of a system of rates which the water carriers would find profitable under operating conditions which would be provided by the proposed improvement. Where comparisons were with rail transportation, carload rates were used because, although the shippers would be in a position to take advantage of 300-ton or 500-ton bargeload rates there would be no alternative trainload rates available to them.

The balance of that paragraph relates to something else.

May I ask you, Mr. Faison, as the man who had charge of the computation of the rates which the committee saw in this hearing document—that was the $2.02 which we all looked at so many times, if you remember—the language of the Corps of Engineers on this table, table 19, page 147 of the 1946 hearings, is this:

Typical savings per ton in line haul costs via proposed Tennessee-Tombigbee waterway as alternate route to upstream movement on the lower Mississippi River.

Then on table 18 there is this language:

Line haul costs of barge transportation on selected sections of the Mississippi River system, Mississippi Sound, and the proposed Tombigbee waterway based on 1939 operations.

With that as a background, is it not a fact, as we developed here in the last few days of the hearing which we had in May, that your computation of the barge costs were based solely and entirely on the cost of the movement of a tow of barges per hour?

Mr. FAISON. May I answer that, Mr. Chairman?

Mr. KERR. Yes.

Mr. FAISON. He is talking about two things. One of them is the diversion of water traffic, using the Mississippi River, through water traffic that is going past New Orleans and going up the Mississippi and past Cairo or Paducah by water. We have said that one-third or one-fourth of the traffic that we have calculated for this waterway are the diversions of that upbound traffic by the Tennessee-Tombigbee route. They are both going by water now, so there is no question of rates involved. It is just a question of, Can you save more by going up a slack-water route than you can by going up and bucking this Mississippi River current, which is approximately 2.5 miles an hour, but in some places 5 miles an hour? There is a comparison there purely on costs as we said in that paragraph that was just read. It is a question of cost. And that is all that we are basing the savings on of this diverted traffic. Two-thirds or three-fourths, or whatever it is, is other traffic. It is traffic that is either moving over land routes or it is traffic that will be brought into existence by this cheap route. And there, our comparison is, and should be, with the rates that now apply and the rates that the barge lines can afford to haul for.

I am afraid that the investigation committee has confused those two items right through. You just did when you read that. You were talking about diverted traffic and rates.

Mr. DONNELLY. I appreciate that. I did it only to lay a preface or a foundation for development. The committee staff has not been confused.

Mr. FAISON. I am sorry——

Mr. DONNELLY. We understand that there are two different types of comparisons. One is the traffic diverted from the Mississippi River; so that it would be water south and water back up again.

Mr. FAISON. And the saving is on a cost basis.

Mr. DONNELLY. That is right. On the other hand, when we get into this other area of traffic that is now moving over land by truck or by train, and we make the comparison, we have found that the Corps of Engineers has done this: They have analyzed the 1939 way bills for various movements—I think some 7,000 movements. Those works sheets are not available; they have been destroyed by the Corps of Engineers. Then the Corps of Engineers took 154 typical movements and analyzed those. Those are in your computations. Then the Corps of Engineers held a hearing in Mobile, Ala.

Mr. FAISON. No. You mean the hearing that was 2 years before this procedure?

Mr. DONNELLY. Yes; but there was a hearing in Mobile?

Mr. FAISON. That is right.

Mr. DONNELLY. And then the Corps of Engineers said the Mobile Traffic Association supplied rates?

Mr. FAISON. That is on 1945. You are confusing two of them.

Mr. DONNELLY. What am I confusing?

Mr. FAISON. You were talking about 1947.

Mr. DONNELLY. The table, Mr. Faison, was 1945 and 1947, both of them.

Mr. FAISON. I am sorry.

Mr. DONNELLY. So that when we are talking about this traffic that is now over land, that you say would move via the Tennessee-Tombigbee, as I understand it, this is based on barge rates and not barge costs, not line haul costs.

Mr. FAISON. On a system of rates by which the barge lines could operate profitably. We do not know what they would charge. There are no rates in existence.

General PICK. Maybe I could explain this. You mean that you worked up a system of rates that you thought the barge lines would or could adopt and make a profit out of it, make it a profitable operation; that is what you did?

Mr. FAISON. That is right.

General PICK. In other words, that was the assumption that you made, that you base your story on?

Mr. FAISON. What else could we do? There were no tariffs on a nonexistent waterway.

Mr. DONNELLY. So that you constructed a system of barge rates?

Mr. FAISON. Yes; or charges, you might say. We know that the bulk of the traffic is not going to be on tariff rates even now.

Mr. DONNELLY. In the charges that you constructed, did you assume cost plus a reasonable profit?

Mr. FAISON. That is right; on this traffic, not the diverted traffic.

Mr. DONNELLY. We are only talking about that which is moving overland by truck or train.

Mr. FAISON. The traffic that would be created by the project.

Mr. DONNELLY. In so doing, how much profit did you allow the barge operator?

Mr. FAISON. We allowed the same profit that the Interstate Commerce Commission figured in their cost studies, through their Bureau of Economics and Statistics, which I think was 4.75 percent, which was the average of the profits of the railroads when this study was made, in addition to amortizing and paying their fixed charges.

Mr. DONNELLY. Now, if you have 4 percent-and-something profit——

Mr. FAISON. I think it was 4.75 percent. Now you are getting into the technical details which some of the people in our division can answer quicker and more clearly than I can. I think I know more or less how they did it and I feel I can judge whether what they did was right. But I do not know the details as well as some of them and, if the chairman will permit me to call two witnesses from my division to tell you exactly how those things were figured, I would be glad to do that.

Mr. KERR. You may call them.

Mr. FAISON. But they have not been sworn.

Mr. KERR. We will swear them.

UNDERESTIMATES IN ENGINEERS' ASSUMPTION OF BARGE RATES ON OTHER PROJECTS

Mr. DONNELLY. While we are waiting for them, may I ask you this question? Based upon your experience in computing these transportation benefits over a long period of years, how good has your assumption on cost plus reasonable profit proven in the constructing of barge rates?

Mr. FAISON. The cost of barge transportation has risen consistently since 1939, which was the basis of this study. The cost of rail transportation has risen probably even more and I think I can explain to you what items it has risen more on.

Mr. DONNELLY. But, by and large, how good has your assumption been in practice?

Mr. FAISON. You mean that the per-ton-mile cost that we assumed has actually turned out?

Mr. DONNELLY. I do not want to confuse the terms. You say ton-mile cost. You said charges or constructed barge rates.

Mr. FAISON. I would say the assumptions that we made on the 1939 basis——

General PICK. No, no—wait a minute. Pardon me, Mr. Chairman, but Mr. Donnelly wants to know this. You said that you made up assumed charges or assumed rates, as a criterion?

Mr. FAISON. That is right.

General PICK. You have done that in other waterways?

Mr. FAISON. That is right.

General PICK. He asked the question, How close your estimates proved out, how close or how near have they been realized? If you can answer that question, all right. If you cannot, say so.

Mr. FAISON. May I answer it in this way? Our estimates are comparisons between two kinds of transportation. We make the estimate of water transportation against the estimate of competitive transportation. Now, if the dollar that is worth a dollar when we make the estimate is worth 50 cents now, then the costs for both traffic have

gone double. But our measurement is still valid, and the only thing is, if the counsel insists on my raising it——

General PICK. No, no. The counsel is not insisting. I do not think you understand the question. The question is this. You made an assumption——

Mr. RABAUT. How close was it to the reality?

General PICK. Take a waterway, take any inland waterway where you made a similar study, a similar assumption, where there were no tariffs. How close was your assumption realized?

Mr. FAISON. The rates were greater than we assumed.

General PICK. When they were finally established?

Mr. FAISON. That is right.

Mr. DONNELLY. The barge rates or charges were greater than you had assumed?

Mr. FAISON. Yes; and so are the competitive rates.

Mr. DONNELLY. To what extent was the increase accounted for by the increased cost of all transportation that you just described? You said that rail went up, water went up?

Mr. FAISON. That is a very complicated question. I can give you 15 different answers according to 15 different waterways that we examined. Our assumptions have not been all on the favorable waterways. We have made assumptions on unfavorable waterways and reported unfavorably on dozens of important projects that cost just as much as this one.

Mr. DONNELLY. If the assumptions that you used for barge charges or rates were more or less exceeded, then would it not follow that your ratio computation of transportation benefits, compared to the assumed charges against rail rates, falls with the increase?

Mr. FAISON. I would say that it increases, and I will tell you why. Suppose that we assume that it was $4 by the Tennessee-Tombigbee and it was $6 by the Mississippi in 1939. Now it is $6 by the Tombigbee and it is $9 by the Mississippi. The spread of the savings has increased and just as you raise the level of these computations, you raise the savings.

Mr. DONNELLY. Now you are back to the Mississippi versus the Tombigbee, and you indicated to me before that was not the basis of the comparison. If the barge charges that you have assumed in reality turned out to be higher——

Mr. FAISON. That is right.

Mr. DONNELLY. Then the basis of your comparison which goes into the cost-benefit ratio would fall, would it not?

Mr. FAISON. No; because the comparison also is with a variable that is also going up and since it is larger than the water cost, as it goes up, your spread increases and your savings increase.

Mr. DONNELLY. Only if the rail rates would increase at the same time, equally as fast as the barge charges are higher than your assumption.

Mr. FAISON. It does not have to increase equally, or necessarily parallel. It is going to find its level eventually or one of the two are going out of business. I do not say that the rail rate increases actually did not follow the rise of water costs, but they have about caught up to them now.

Mr. DONNELLY. Can you tell us this as an economist, Mr. Faison? Have not the barge charges increased at a greater rate in the past few years than the rail rates?

Mr. FAISON. The barge charges? I do not know, for this reason. The majority of the tonnage that we are talking about does not travel on barge tariff rates. It travels by contract or, as you explained, in industry-owned bottoms. There are no published rates that cover most of this traffic that we are talking about, so I cannot answer your question.

Mr. DONNELLY. So that makes all of these computations hypothetical only, does it not?

Mr. FAISON. I do not think so. I think if you are providing a means of transportation that is intrinsically cheaper than any other, that no matter what the temporary differences in the tariffs are, sooner or later it is going to adjust itself. A carrier that is putting in rates that are not remunerative is either going out of business or he is going to put his rates back up to where they are remunerative, and if he does, then the waterway is going to come into its own as the cheapest mode of transportation there is.

Mr. DONNELLY. But you just said that by and large the predominant majority of the commodities would not move on these so-called or assumed barge rates or charges?

Mr. FAISON. The barge costs, if you want to say so, have gone up and for that reason the barge lines could not today, in 1951, charge what we assumed in 1939.

Mr. DONNELLY. You see the significance of this, Mr. Faison?

Mr. FAISON. Yes; I think I do.

EFFECT OF ENGINEERS' UNDERESTIMATES ON BENEFIT-COST RATIO

Mr. DONNELLY. The project cannot be authorized or constructed under the statutory criterion unless there is a favorable benefit-cost ratio. In 1947 the Engineers said the benefit-cost ratio was 1.13 to 1. Therefore an error of only 13 percent in that cost-benefit ratio would destroy the ratio and that 13 percent can be found, and the committee staff says it is found—that is, the 13-percent error—in your own computations.

Mr. FAISON. On the other hand, if that 13 percent happened to be the other way, the public would be getting its money back and it would be getting interest on its money. It would be getting its investment amortized and it would be making 26 percent profit every year. And we would be remiss if we did not recommend a project that promised that sort of return. If we were wrong, if we were 13 percent wrong, the public would get its money back. And it would get its interest on its money and it would get its investment. It is not throwing it down a rat hole.

PASSING OF WATER MOVEMENT SAVINGS ALONG TO THE PUBLIC

Mr. DONNELLY. Mr. Faison, you say the public would get its money back. The benefits must be passed along to the public before the public gets back anything, is not that so?

Mr. KORTH. In connection with that, Mr. Chairman, on the matter of passing the benefits on to the consumer, in this same report that I believe you read from, a Water Policy for the American People, there is a statement made by the Commission on page 209 which it might be enlightening to read. I do not want to burden the record or the committee, but it is very short.

Mr. KERR. You may read what you think is necessary from that document.

Mr. KORTH. Just one paragraph. It reads as follows:

> It is no more possible for shippers on the rivers to retain the benefits of low-water rates for themselves than it is for lake or ocean shippers to retain the benefits of low-water rates. Under the old basing-point system, delivered prices on steel were generally quoted on the basis of rail rates, even when the shipments moved by water, so that the producers would retain the profits resulting from the savings below the rail transportation costs. Now the universal practice is to give the buyer of the steel the benefit of the lower water rates when he ships by river. When grain began to move by barge from river elevators on the upper Mississippi and Illinois Rivers to Chicago and other markets, the elevators purchasing the grain tried at first to keep the profits resulting from the lower river rates. Competition soon forced them to give the benefit of the lower rates to the farmers in higher prices bid for the grain, amounting to 3 to 5 cents per bushel above the prices paid on all-rail shipment.

That is the only quotation I wanted to read.

Mr. DONNELLY. That, Mr. Korth, is apparently a result of the Supreme Court's decision on the basing-point price case which came down about a year and a half ago. But what we have here is petroleum, where the delivered cost remains the same. Petroleum does not have a basing-point price system. The price is the same in our gas tanks in the cities where we buy it in the form of gasoline, or whatever it is. So I think your analogy on steel does not have application to petroleum which we have been discussing here.

Mr. KORTH. We can throw the steel out and rely on the grain. The grain case I think is good.

One other thing in that connection. I believe you read from the transcript of testimony this morning before an Interstate Commerce Commission examiner. Could you tell me offhand who the man was? Was it a fellow by the name of Stephens?

Mr. DONNELLY. Yes.

Mr. KORTH. Here is a letter that is from the files of the American Petroleum Industry Committee which is apparently directly contrary to the statement that was made in the testimony. If you would like to look at that for just a moment? Have you seen it by any chance?

Mr. DONNELLY. No, I have not seen this.

How do you want to handle this, Mr. Korth? Do you want to put this in the record?

Mr. KORTH. I think so.

Mr. DONNELLY. If it is identified as to authenticity, because it does not even bear a signature.

Mr. KORTH. The original is in the addressee's files, I understand. If you would like us to get a photostatic copy, that would probably be better and then let us introduce it.

Mr. DONNELLY. In the meantime, may we have a copy of this to look at?

Mr. KORTH. Surely.

Mr. FORD. May I make a suggestion at this point, that if it is properly identified, the letter be put in the record at this point, because I think it is entirely relevant at this point.

Mr. KORTH. That is what I intended.

AFFIDAVIT

STATE OF TENNESSEE,
County of Knox, ss:

Arthur M. Stephens being duly sworn, says: That on the 25th day of March, 1940, he personally dictated and signed the original of the attached copy of letter addressed to Baird H. Markham, director, American Petroleum Industries Committee, New York, N. Y.

This certifies that the attached is a true copy of original letter of March 25, 1940, to Baird H. Markham from said A. M. Stephens, and that this authentic statement of facts is true in every particular.

(Signed) ARTHUR M. STEPHENS.

Subscribed and sworn to before me this 22d day of June 1951.

[SEAL] **J. R. RITCHIE, *Notary Public.***

STANDARD OIL CO.,
(INCORPORATED IN KENTUCKY),
Louisville, Ky., March 25, 1940.

MR. BAIRD H. MARKHAM,
Director, American Petroleum Industries Committee,
New, York, N. Y.

DEAR MR. MARKHAM: The recent Nation-wide and much publicized propaganda, by those interests and individuals who are seeking support for their theories and arguments for the regulation of inland water carriers and the imposition of tolls for the use of locks, unduly emphasizes and, by design, describes inaccurately and incompletely certain testimony of the traffic manager of the Standard Oil Co. of Kentucky in rate proceedings before the Interstate Commerce Commission involving very small sections of the South. That such testimony, voiced in plain and unequivocal language, should be improperly construed and misinterpreted by the average layman, or even the more enlightened Congressman, as something for account of the country at large, and as other than something germane only to the issues of the proceedings referred to, is ample proof of the popular misconception as to procedure before the Interstate Commerce Commission and its rules of evidence, and as to the marketing units of what was once the old Standard Oil Co. of New Jersey dissolved by the decree of the United States Supreme Court in 1911.

The traffic manager of the Standard Oil Co. of Kentucky can speak only for his company from his observations as a transportation expert, and not as a higher officer vested with the authority and supervision over the market prices for his petroleum products. The record of the proceedings referred to shows that his utterances were qualified to the condition of competition so predominant in the South today as to both marketing and transportation, and the controlling force which generally affords the consumer a share of the economy realized from river transportation, notwithstanding that the Interstate Commerce Commission proceeding cited, unfortunately for the opposition, gave less proof of this particular element than might have been shown elsewhere.

There are many experienced observers and students of the regulatory effect of the Interstate Commerce Act who readily ascribe to themselves, and properly so, an abundance of wisdom and practical knowledge in respect to the subject of rail carrier's competition with private water carriers under the Interstate Commerce Act; in fact, those who participated in the proceeding (235 I. C. C. 115) generally feel that the ultimate effect of the decision in the proceeding as entered October 30, 1939, will be a lower price level in consideration of water-compelled rates prescribed fom west of the Mississippi River; however, there is absolutely no warrant or justification for the calculation or premise that the statements accredited to the traffic manager of the Standard Oil Co. of Kentucky support the representations that for the country at large the petroleum industry in the main is denying the ultimate consumer the inherent economies of low-cost river transportation.

Yours truly,

_____,
Traffic Manager.

Mr. FAISON. Mr. Chairman, I have here some more testimony on this same subject of Mr. Stephens. As was explained this morning, Mr. Stephens' testimony is classic. It has been read into the Congressional Record; I believe there must have been thousands of dollars spent on reproducing that same testimony that counsel read into the record this morning. In every case that I have attended up here that involved water transportation, it has been introduced by the people who are opposed to the waterways, because it is the only statement of the sort that I know of that has ever been introduced.

General PICK. Tell the committee what it is; identify it.

Mr. FAISON. This is an extract of testimony of Sidney A. Swensrud, vice president, Standard Oil Co. of Ohio, before the Temporary National Economic Committee, Congress of the United States, Seventy-sixth Congress, second session, pursuant to Public Resolution No. 113 (75th Cong.), pages 8452 and 8453.

This is the vice president of the Standard Oil Co. of Ohio talking.

EXTRACT OF TESTIMONY OF SIDNEY A. SWENSRUD, VICE PRESIDENT, STANDARD OIL CO. OF OHIO, BEFORE THE TEMPORARY NATIONAL ECONOMIC COMMITTEE, CONGRESS OF THE UNITED STATES, SEVENTY-SIXTH CONGRESS, SECOND SESSION, PURSUANT TO PUBLIC RESOLUTION NO. 113 (75TH CONG.)

(Pp. 8452 and 8453)

The CHAIRMAN. The best market sites, being wide awake, and I have no doubt there are innumerable competitive devices that will occur readily to you, altogether independent of price, which an up-and-coming company like the Standard Oil of Ohio can use?

Mr. SWENSRUD. That is certainly correct. We have been talking here about price reductions or their equivalent. That is the competition as regards price, and I think all we are saying is that there are various kinds of price competition. Some of them are reductions in the posted price, some of them are secret reductions that lead to reductions in the posted price a little bit later. I suppose this whole thing leads us into the final subject that I would like to discuss and that is the passing on of savings to the consumer.

There has been considerable interest in where the consumer finally will get these savings. There is properly much general interest in the extent to which lower costs resulting from improved equipment or techniques are passed on to consumers in the form of lower prices. For gasoline, lower costs are obviously of various types; they may result from a decrease in prices for crude oil, from lower transportation, refinery, or marketing costs, and from better realizations on other petroleum products. Lower costs resulting from the use of new equipment which requires a capital investment are much more important in the petroleum industry than cost reductions resulting from the adoption of new methods which require no capital investment.

There is apparently in some circles a naive belief that there is something wrong unless prices are automatically lowered by the exact amount of saving achieved. This belief completely disregards the way business and businessmen actually function. How the "passing on of lower cost" actually occurs can best be described by an illustration that we have tried to picture here, a typical example of how reductions in cost tend to be passed on.

Let's say here is city A[1] and here is the historic source of supply for this city. The refinery is located down here at city B. We ship up here by rail at a cost of 2 cents a gallon, let us say. Now someone finds that this river has been made navigable and they can now barge up this river and there is perhaps a good location for a refinery down here. Maybe there is crude oil nearby, so they build a refinery here and they barge up from this refinery up to some point where they establish the terminal near city A.

Now let's assume that the cost of the barging is one-half cent a gallon. Now this refiner C then has an advantage of 1½ cents a gallon, not quite that much because he has had to put in a water terminal, so he has now the problem of reshipping, but he has a substantial advantage, let us say, nonetheless.

Now he is going to begin to look around city A for some places to sell some of this gasoline and take advantage of these savings he has made. But typically he is not going to get very many dealers unless he makes them some kind of a proposition that is more favorable than the one they are already enjoying, so he will perhaps offer to sell some dealer—if we said that the wholesale price was 5 cents and the freight 2, that makes 7, you might say that he would make an offer of 7 cents, but he wouldn't perhaps get very much business, so he makes an offer of 6½ cents, as little under 7 cents as he thinks will get the business, because after all he is interested in holding onto all the saving he can.

I think we can assume that there is nothing odd about the fact that businessmen try to get as high price as they can for their product, so he makes as little concession as he can and still get some business, but after he has made concessions to two or three dealers up here in city A and signed them up, why the refineries down here in refinery city B begin to wonder what is happening and they don't need to wonder very long, so they decide to meet this price from the fellow in city C and so the price is down. The openly posted price is down.

Then, if refiner C has still got some advantage left, he will tend to reduce his price again, and so it goes, until eventually slowly and irregularly the saving is finally passed on to a very large extent.

Now the over-all evidence that the savings of this industry have passed on lies, of course, in the fact, as you saw this morning, the price of gasoline has gone down steadily over almost the entire history of this business and profits have not gone up as a percentage of the investment. They have gone down, too. So that I don't think we can doubt that the savings that this industry has accomplished have been passed on. The price has been reduced. The profits haven't greatly increased. They have not increased at all, I should say. Now you can take more specific data—take the average retail price of gasoline today throughout the United States which exceeds the Oklahoma price at the wholesale refinery about 7½ or 8 cents. Five or ten years ago it exceeded it by around 10 cents. There is something like 2 cents, then, lower price at retail today relative to wholesale cost than was the case 10 years ago.

Finally, I would like simply to suggest these several tests of the industry so far as the performance of its obligation from the public point of view is concerned. Have we done a good job or haven't we? In the opinion of the present writer the industry should be subjected to several tests of its social efficiency.

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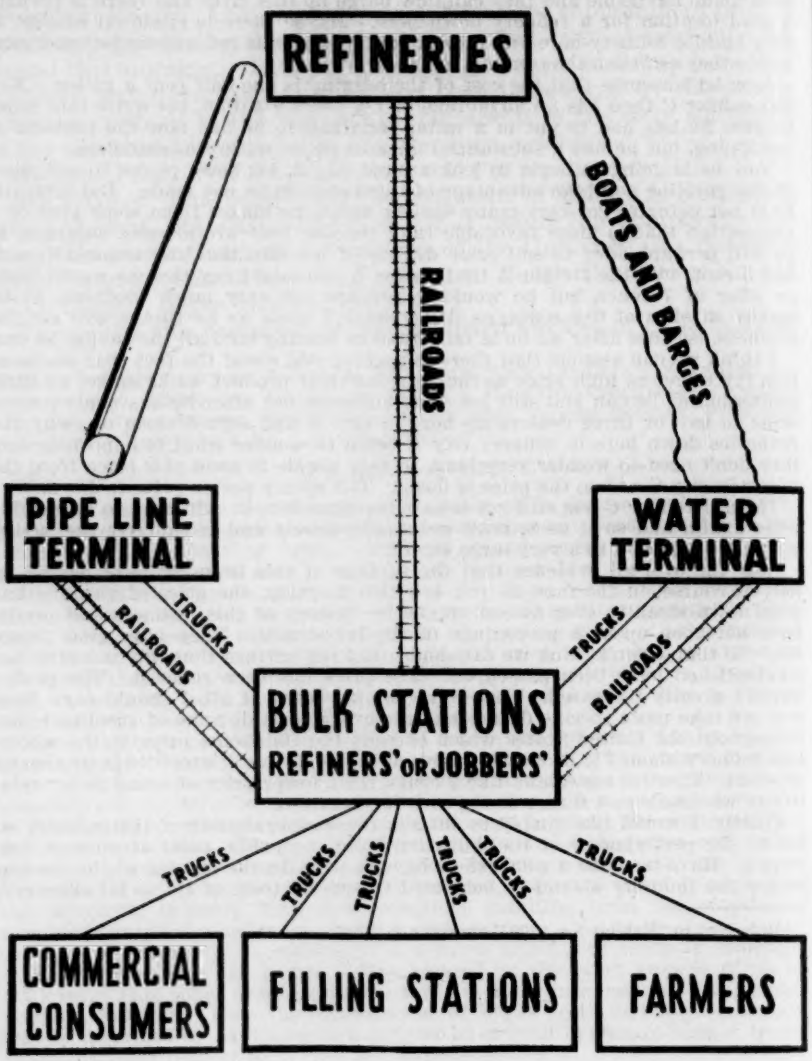
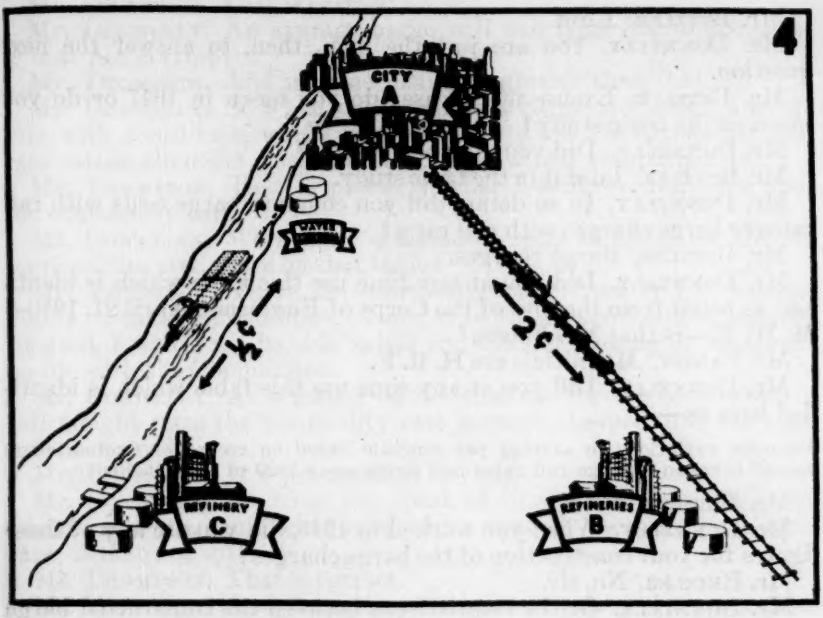
[1] Referring to "Exhibit No. 1209," appendix, p. 8717.

EXHIBIT No. 1209

[Submitted by Sidney A Swensrud]





(Discussion off the record.)

WITNESSES

WILLIAM H. BETZLER
C. N. THOMPSON

(The witnesses were duly sworn by Mr. Kerr.)

ENGINEERS' COMPUTATIONS OF PREDICTED BARGE RATES

General PICK. Mr. Faison, you made a statement that you thought that the profits in this water operation amounted to 4.75 percent, but you did not know definitely whether that was the figure or not.

Mr. FAISON. That is the basis on which we figured in 1947.

General PICK. Is it definite in your mind that it is 4.75 percent?

Mr. FAISON. No; I would like to establish that.

General PICK. You want to establish it by Mr. Betzler?

Mr. FAISON. Yes.

Mr. BETZLER. The margin between bare costs and the rate elements that we use was based on 4 percent, which was considered to be the average earned by the railroads in 1939. That is taken from Senate Document 63 of the study by Dr. Ford Edwards of the Interstate Commerce Commission, Bureau of Transport Economics.

Mr. DONNELLY. Does that mean, Mr. Betzler, that the margin of profit which was included in the assumption of barge charges for the proposed Tennessee-Tombigbee was to be the same, 4 percent, as the profits shown by the railroads in 1939?

Mr. BETZLER. That is correct.

Mr. DONNELLY. Did you make the computations that we are now speaking of?

Mr. BETZLER. I did.

Mr. DONNELLY. You are just the man, then, to answer the next question.

Mr. BETZLER. Excuse me, please; do you mean in 1947 or do you mean in the basic study?

Mr. DONNELLY. Did you do it either time?

Mr. BETZLER. I did it in the basic study.

Mr. DONNELLY. In so doing, did you compare barge costs with rail rates or barge charges with rail rates?

Mr. BETZLER. Barge charges.

Mr. DONNELLY. Did you at any time use this table which is identified as being from the files of the Corps of Engineers, April 21, 1950—M. W. F.—is that Mr. Faison?

Mr. FAISON. My initials are H. R. F.

Mr. DONNELLY. Did you at any time use this table which is identified here as—

Assumed variations in savings per ton-mile based on record of fluctuation in spread between average rail rates and barge costs 1929 to 1948, inclusive.

Mr. BETZLER. No, sir.

Mr. DONNELLY. When you worked in 1945, did you use any of those figures for your construction of the barge charges?

Mr. BETZLER. No, sir.

Mr. DONNELLY. Or the comparisons between the constructed barge charges and rail rates?

Mr. BETZLER. No, sir.

Mr. DONNELLY. Who in 1947 made the recomputation for the engineers?

Mr. BETZLER. I think Mr. Thompson did.

Mr. DONNELLY. Mr. Thompson has just been sworn.

Mr. Thompson, in 1947, when you recomputed the transportation benefits for this project, did you use actual rail rates and constructed barge charges or did you use what is shown in this table?

Mr. THOMPSON. We used the rail rates that were in effect in 1947 with the barge charges that were constructed, and were adjusted from 1945 to 1947.

Mr. DONNELLY. In so doing, in 1947, did you use the computations of typical movements, 154 typical movements?

Mr. THOMPSON. I do not recall the precise number, but it was a sampling process.

Mr. DONNELLY. You are certain in all the computations shown in the work you did in 1947, which you will find on that table, you used actual rail rates in existence?

Mr. THOMPSON. In adjusting from 1945 to 1947; that is correct.

Mr. DONNELLY. Did you use class rates or commodity rates?

Mr. THOMPSON. We used the applicable rate on the commodity, and the rule is in the absence of a specific commodity rate we will take the class rate, or a percentage of the class rate provided by the exceptions to the classification.

Mr. DONNELLY. Mr. Thompson, is it not a fact that the predominant part of the commodities that move by barge are bulk commodities?

Mr. THOMPSON. Substantially so.

Mr. DONNELLY. And the railroad freight cars carry about 50 tons; do they not?

Mr. THOMPSON. That is correct.

Mr. DONNELLY. An average barge will run from 300 to 500 tons; is that not correct?

Mr. THOMPSON. And in some instances greater than that.

Mr. DONNELLY. So when you compare a bargeload, using a barge rate with a rail rate, would you not have to use the commodity rail rate rather than the class rail rate to get a true comparison?

Mr. THOMPSON. That is precisely what I said we did. We used the commodity rate.

Mr. DONNELLY. Were there commodity rates in effect for the six commodities used there on that table?

Mr. THOMPSON. There are commodity rates from and to various points on these commodities. Now, as to what extent on the samples we used, I would not be able to tell you without looking at the tariffs on file with the Commission.

Mr. DONNELLY. As a matter of information for the committee, in rail freight rates the commodity rate is much cheaper than the class rate; is it not?

Mr. THOMPSON. It is presumed to be; yes.

Mr. DONNELLY. So, when you speak of 10 carloads of freight, they might move at a commodity rate, which is much cheaper than a class rate; is that not so?

Mr. THOMPSON. That is correct.

Mr. DONNELLY. And these computations are pretty close, since this ratio is only 1.13 to 1, so can you tell us generally whether there were commodity rates available for each of those six principal commodities listed on that table when you, in 1947, made your recomputations?

Mr. THOMPSON. I could not tell you that without checking the working sheets and the tariffs on these commodities. As I said before, there are commodity rates from and to the various points throughout the country on these commodities that are listed. I could not say in every instance that there were commodity rates from and to the points that were involved in the sampling.

ENGINEERS' USE OF 154 TYPICAL MOVEMENTS

Mr. DONNELLY. I have a question that I would like to ask you with respect to your use of typical commodity movements in 1947. Now, in 1947 you made your recomputation on the basis of several different factors, and correct me if I am not accurate, and did you not consider the 154 typical movements?

Mr. THOMPSON. Whatever the number was, that was shown on the analysis sheets.

Mr. DONNELLY. Did you not reconsider the 1939 waybills?

Mr. THOMPSON. Only to the extent of developing the sample commodities.

Mr. DONNELLY. Did you not consider the testimony in the Mobile hearing held by the Corps of Engineers?

Mr. THOMPSON. Well, I cannot say that I considered the testimony in the hearing and the adjustment of the benefits from 1945 to 1947 because I was interested in the tonnages which were basically from the waybills.

Mr. DONNELLY. Now, we have here an analysis by the staff of the Corps of Engineers, 154 typical movements used by the engineers to

increase the savings from the 1945 to 1947 base, and you will see, gentlemen, that this is 1945 and they increased in every case from 1945 to 1947, and this is the gentleman who made those increases.

Now, Mr. Thompson, the detailed analysis sheet for the 7,000 potential shipments was based upon the 1939 waybills; was it not?

Mr. THOMPSON. That is right.

Mr. DONNELLY. And the work sheets were destroyed by the engineers in the course of their regular practice, some time prior to the time the investigating staff began its studies; is that not correct?

Mr. THOMPSON. That is my understanding.

Mr. DONNELLY. Now, prior to the time those records were so destroyed, the 7,000 records, the engineers chose from those sheets the 154 movements which were considered typical; is that not correct?

Mr. THOMPSON. I do not recall any time when there were any particular shipments chosen whatsoever.

Mr. DONNELLY. That is the information that the Corps of Engineers furnished to the committee. The committee staff has analyzed the 154 typical movements which account for those increases in tonnages, from 1945 to 1947, in part, if not wholly, and in analyzing those movements we found 27 of the movements show very little or no cost differential in favor of water transportation, or the transportation cost by the alternate Mississippi route lower than by the proposed route. In the 27 cases no savings were computed by the engineers. Is that correct?

Mr. THOMPSON. That is the statement that you are making. I would not say that because I cannot talk on a subject like this when I do not have the files before me. The investigating committee had full access to the files.

Mr. DONNELLY. Mr. Faison, are you able to answer the question?

Mr. FAISON. There were a number, twenty-odd, that showed no savings, and they were thrown out of the 1947 estimate, although they were taken just as typical movements to show how eliminations were made, but, Mr. Chairman, I want to make this point clear—I do not believe counsel is clear on this—that the 1945, 7,000 files, were not papers. They were three or four papers thick, each one, the detailed analysis of each movement that we used in making up the 1945 report and they were destroyed before the 1947 estimate was called for, and I believe Mr. Thompson will corroborate me in saying these 154 or 157 typical movements were selected from the way bills study of 1939 which was not ours, as typical, and were not picked out of the 1945, 7,000 analysis sheets, because they were not in existence in 1947.

Mr. DONNELLY. Where did the 154 typical movements come from in 1947?

Mr. FAISON. Mr. Thompson, you can answer that.

Mr. THOMPSON. I can answer that. The IBM sheets from which the original 7,000 analyses were taken are still available and on file with the Interstate Commerce Commission, and it was from those, or a review of those, that the samples were developed. I might state in connection with this adjustment in 1945 to 1947 that the investigative staff had access to the specific adjustments on each separate commodity that was involved. And in adjusting from 1945 to 1947 there were decreases as well as increases in benefits.

Mr. DONNELLY. I have furnished each member of the committee here with an analysis of these typical movements. I can go through them

one by one. Instead, I would like to put the document in the record at this point, and I would like to read the conclusion that we find at the bottom of page 2:

It will be observed from the foregoing summary analysis of the "typical" movements considered by the engineers, that less than 10 percent of the shipments involved are at all likely to move by the proposed waterway. If these 154 shipments are a fair sample of the total movements considered by the engineers in 1945, it may be unequivocally asserted that most of the 1945 estimate of new tonnage was worthless. Inasmuch as the 1947 and 1949 figures were based on the 1945 estimates, these latter estimates of new tonnage would also have a limited value.

(The document referred to is as follows:)

ANALYSIS BY THE COMMITTEE STAFF OF THE CORPS OF ENGINEERS 154 TYPICAL MOVEMENTS USED BY THE ENGINEERS TO INCREASE THE SAVINGS FROM 1945 TO 1947 BASIS.

ANALYSIS OF "TYPICAL" MOVEMENTS

The detailed analysis sheets for some 7,000 potential shipments, which were used by the engineers in their determination of the amount of estimated savings in the 1945 study, were destroyed sometime prior to the present inquiry. However, prior to their destruction, the engineers chose from these sheets 154 movements which were considered typical. Data and calculations concerning these 154 "typical" movements which were used by the engineers in making their 1947 revision of the savings on new tonnage are still available. An analysis was made by this staff of these 154 "typical" movements and certain information, developed as a result of this analysis, is set forth below:

Twenty-seven movements showed very little or no cost differential in favor of water transportation, or the transportation costs by the alternate Mississippi River route were lower than by the proposed route. In these cases, no savings were computed by the engineers. Inclusion of these shipments as typical is, therefore, illogical.

Thirty-two movements were between points lying wholly within the areas of existing waterways. These movements could be made over existing waterways at a cost less than that charged by rail carriers. None of these movements, which lie wholly within the Mississippi and Ohio River area, will move by the proposed waterway inasmuch as the cost of transportation via the Mississippi River is not likely to be greater than via the proposed waterway.

Seventy-three additional movements could also be made over existing waterways, principally by the Mississippi, Ohio, and Tennessee Rivers at costs less than rail rates. In spite of this cheaper alternative method of shipment, this traffic continued to move by rail. About one-third of the 105 movements mentioned in this and the preceding paragraph were joint movements with rail carriers. Except in one instance, the engineers calculated as savings the difference between the cost of transportation by the alternate water route via the Mississippi and the cost by the proposed waterway. This difference will be smaller than calculated by the engineers, if not nonexistent.

Four of the movements were entirely within the area of the Mississippi River Basin and, therefore, unlikely to move over the proposed waterway.

Three of the movements were such that substitution of fully distributed railroad costs for the rail rates used by the engineers would destroy any cost differential in favor of the proposed waterway.

Only three of the remaining movements, which were used, were between points on waterways.

One movement was bauxite, which is no longer typical because the plant formerly processing bauxite in the area is not active for this purpose.

One movement involved alumina. This shipment consisted of a movement of 253,000 tons of alumina which accounted for 46 percent of all the north-bound tonnage included in the 154 "typical" movements and accounted for over 40 percent of the total tonnage in the sample, both north-bound and south-bound. Field study has disclosed that alumina is not likely to be moved via the proposed waterway.

Three movements were rail-barge-rail, i. e., involved two transshipments.

One movement was phosphate rock from Florida to St. Louis. Its movement

was predicated upon the superiority of the Mobile route over the New Orleans route.

Three movements out of 154 were omitted by the engineers because of duplication and for other reasons.

It will be observed from the foregoing summary analysis of the "typical" movements considered by the engineers that less than 10 percent of the shipments involved are at all likely to move by the proposed waterway. If these 154 shipments are a fair sample of the total movements considered by the engineers in 1945, it may be unequivocally asserted that most of the 1945 estimate of new tonnage was worthless. Inasmuch as the 1947 and 1949 figures were based on the 1945 estimates, these later estimates of new tonnage would also have a limited value.

INCREASE IN WATER CARRIER COSTS, 1947–50

Now, Mr. Thompson, I have here a document which was produced from the files of the Corps of Engineers, and I would like to read it. It is only a few lines:

Estimate increase in water carrier line hauls, unit cost, 1947–50. Composite for all commodities, 15 percent.

NOTE.—This increase of 15 percent of the unit cost would have been larger but for the fact that there was a substantial increase in the efficiency in operating companies during that period of time.

Is that a correct statement of the facts, sir?

Mr. THOMPSON. I would not say that I would be qualified to answer that since I did not prepare the data from which that was set up.

Mr. BETZLER. That has nothing to do with this. That was given as a result of a question asked in connection with the line haul costs between 1947 and 1950, for information purposes for someone else. It does not belong in the Tennessee-Tombigbee file at all.

Mr. DONNELLY. It does state the facts generally with respect to the increase in barge costs from 1947 to 1950, does it not?

Mr. BETZLER. That may be a different set of barge costs than we used.

Mr. DONNELLY. Is not that a national average stated there?

Mr. BETZLER. No, that is not a national average.

Mr. DONNELLY. What is it?

Mr. BETZLER. It is an average based on some cost figures that were worked up in connection with something else. It is some information that comes to us from a very confidential source and we could not divulge any figures in connection with that because it was given to us in confidence, and it comes from one particular company. According to law, we would not be allowed to tell.

Mr. DONNELLY. Can you tell the committee, Mr. Betzler, whether that statement is an accurate statement?

Mr. BETZLER. It is an accurate statement as far as it goes.

Mr. DONNELLY. The latest benefit cost figures of the Corps of Engineers on this project are for 1947, are they not?

Mr. BETZLER. Yes, I believe they are.

Mr. DONNELLY. If we used that which you have in your hands, the 15 percent increase, to bring us up to 1950, does not that 15 percent increase have application to the proposed Tombigbee?

Mr. BETZLER. No, because it is a different set of costs.

Mr. DONNELLY. Has the Corps of Engineers readjusted the benefit cost ratio for the Tombigbee for 1950 or 1951?

Mr. BETZLER. I would not know, to my knowledge.

Mr. KERR. Did you make that record?

Mr. BETZLER. No, I did not.
Mr. DONNELLY. It is a part of their files.
Mr. BETZLER. It is not mine.
Mr. KERR. You cannot testify about it if you did not make it.
Mr. BETZLER. No, I cannot testify. It is not mine.

QUESTIONNAIRES SENT OUT TO SHIPPERS

Mr. DONNELLY. Who in the Corps of Engineers knows the results of the questionnaires that were sent out by the Corps of Engineers with respect to the proposed project and the possible use of it by shippers?

Mr. BETZLER. In what year?

Mr. DONNELLY. When the questionnaires were sent out.

Mr. BETZLER. The questionnaires went out twice, to my knowledge.

(NOTE.—The results of the 1945 questionnaires, as shown by records of the Corps of Engineers, are as follows:)

MEMORANDUM

MOBILE, ALA., *April 16, 1945.*

Subject: Tennessee-Tombigbee resurvey.
To: E. E. Bottoms.
From: C. N. Thompson.

Since it now appears that all the shippers and industries to whom were sent data sheets, that are interested in any way in the proposed canalization program, have returned the same, I am giving you below my analysis of those returns.

1. *Data sheets sent out.*—Before leaving Washington for Mobile, I prepared from Dun & Bradstreet, city directories, telephone directories, and the old mailing list records, a new mailing list of 1,124 names. Subsequently there was another mailing list prepared in Washington from waybills used by the B. I. R., and sent to Mobile. From that list new mailings totaling 1,410 were made. The total data sheets sent out as of this date is 2,534. The serial numbers are 1 to 2000, inclusive, and 3404 to 3937, inclusive. The numbers between 2000 and 3404 represent IBM sheets.

2. *Data sheets returned to Mobile.*—As of this date a total of 1,338 data sheets has been received. That number is 52.8 percent of the total sent out.

3. *Classification of returns.*—The data sheets received at Mobile have been classified and listed as follows:

Item	Number	Percent of total	
		Sent out	Returned
Reported tonnage	173	6.8	12.9
Comments only	703	27.7	52.5
No comments	462	18.3	34.6
Total	1,338	52.8	100.0
Favor	232	9.1	17.3
Oppose	20	.9	1.6
Neutral	1,086	42.8	81.1
Total	1,338	52.8	100.0

4. *Analysis of tonnage reported.*—The tonnage has been classified according to group unit cost factors; i. e., it has been divided into 12 separate general groups, and as of this date appears as follows:

Group No.	Tons of 2,000 pounds	Percent of total
1	657,753	23.1
2	537,397	18.8
3	677,810	23.8
4	403,171	14.1
5	27,298	1.0
6	27,434	1.0
7	358,150	12.5
8	54,320	2.0
9	4,500	.2
10	85,880	3.0
11	12,300	.5
12		
Total	2,846,013	100.0

Since approximately 40 percent of the tonnage reported would move from and to points not on or via the Tennessee-Tombigbee waterway, the actual tonnage assignable to the waterway analysis would be 1,707,608 tons. The directions of the tonnage if actually moved by the waterway would, on the basis of the data sheets, be as follows:

	Tons
57 percent north-bound	973,336
43 percent south-bound	734,272

In view of the comments in connection with the data reported, and in light of the experience gained by personal contacts in the field, the most that can be said for the tonnage reported is that there is a semblance of interest evidenced by the petroleum, sulfur, sugar, lumber, canned foods, and sand and gravel industries. In my opinion the tonnage reported cannot be relied upon as a basis for potential or probable tonnage that might move via the waterway, should it be constructed. Of all the tonnage reported thus far, the only items that might be considered in establishing potential or probable traffic are:

	Tons
Sulfur	166,140
Aluminum oxide	506,820
Petroleum	329,952

It may be assumed that the 173 shippers and industries reporting tonnage, and the 59 indicating favorable views regarding the waterway, actually favor its construction. These, of course, have not followed the suggestions always advanced by railroad interests.

5. *Analysis of data sheets indicating opposition.*—Out of total returns of 1,338 data sheets, only 20 may be considered as voicing opposition. The opposition reflects merely personal views, selfish in most instances, and disregards the general welfare of the national population. In fact, it is not difficult to see the hand of the railroads suggesting the action to be taken by many shippers and industries. For example see below:

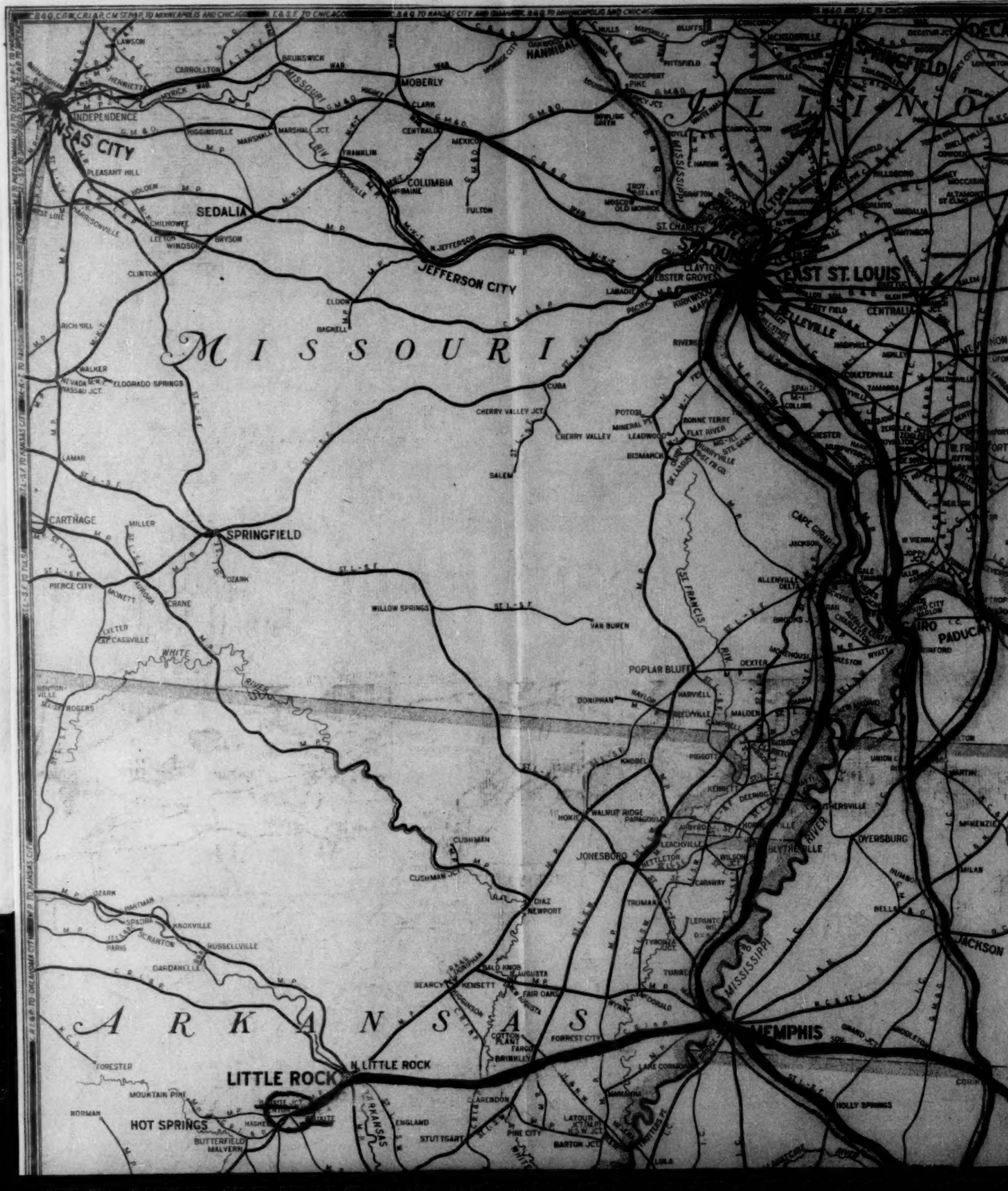
"Frankly, we do not have any occasion to use this waterway and really think at this time any further improvements along this line should be foregone, at least until greater demand for it following the completion of the present war program, and the tremendous cost that must be shouldered by the American people" (DS–133).

"* * * I can only reiterate what I told Mr. Spottswood in 1935 * * *" (DS–793).

"Personally, the writer is opposed to the United States Government spending any more money on river improvements, particularly at this time when our national debt has reached its present proportions * * *" (DS–1460).

"* * * We cannot hope for the railroads to continue to maintain their properties and operate efficiently unless the shippers and receivers continue to cooperate with them 100 percent. We are frank enough to tell you that is our choice and we can offer no encouragement whatever for movement of coal from the mines we represent, other than by railroads" (DS–).

MACON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CAPE GIRARDEAU
JONESBORO
MEMPHIS
LITTLE ROCK
N. LITTLE ROCK
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JACKSON
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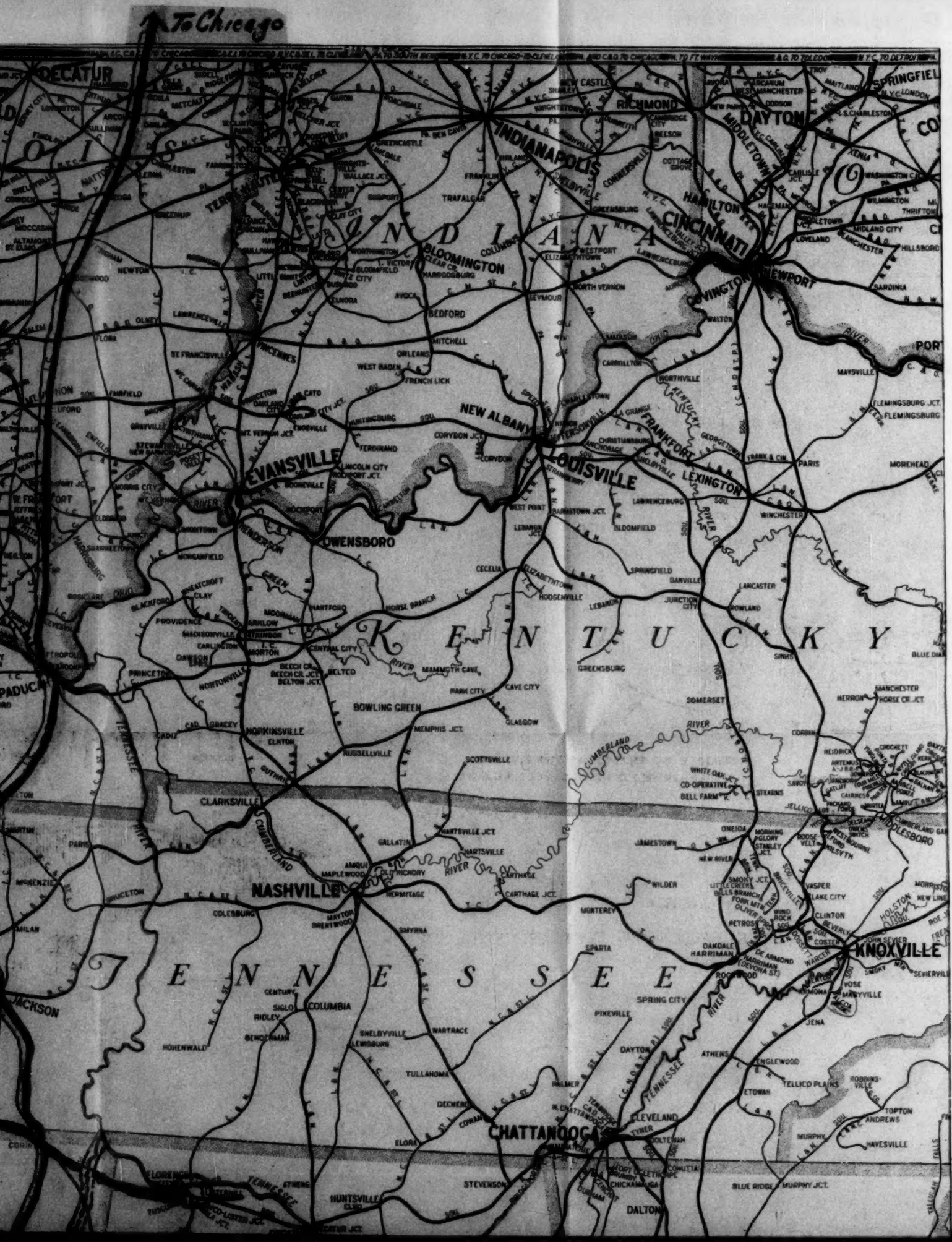
WHITE RIVER
ARKANSAS RIVER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BLOOMINGTON
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PORTSMOUTH
EVANSVILLE
NEW ALBANY
LOUISVILLE
FRANKFORT
LEXINGTON
OWENSBORO
PADUCAH
BOWLING GREEN
HOPKINSVILLE
CLARKSVILLE
NASHVILLE
MIDDLESBORO
KNOXVILLE
CHATTANOOGA
JACKSON
HUNTSVILLE
DALTON
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ILLINOIS
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Ohio River
Cumberland River
Tennessee River
Kentucky River
Green River
Wabash River

PINE BLUFF
SHREVEPORT
MONROE
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BATON ROUGE
LAKE CHARLES
ABBEVILLE
NEW IBERIA
LAFAYETTE
EL DORADO
GREENWOOD
BOGALUSA
LOUISIANA
MISSISSIPPI
MISSISSIPPI RIVER
RED RIVER
OUACHITA RIVER
LAKE PONCHARTRAIN
LAKE MAUREPAS
CALCASIEU LAKE
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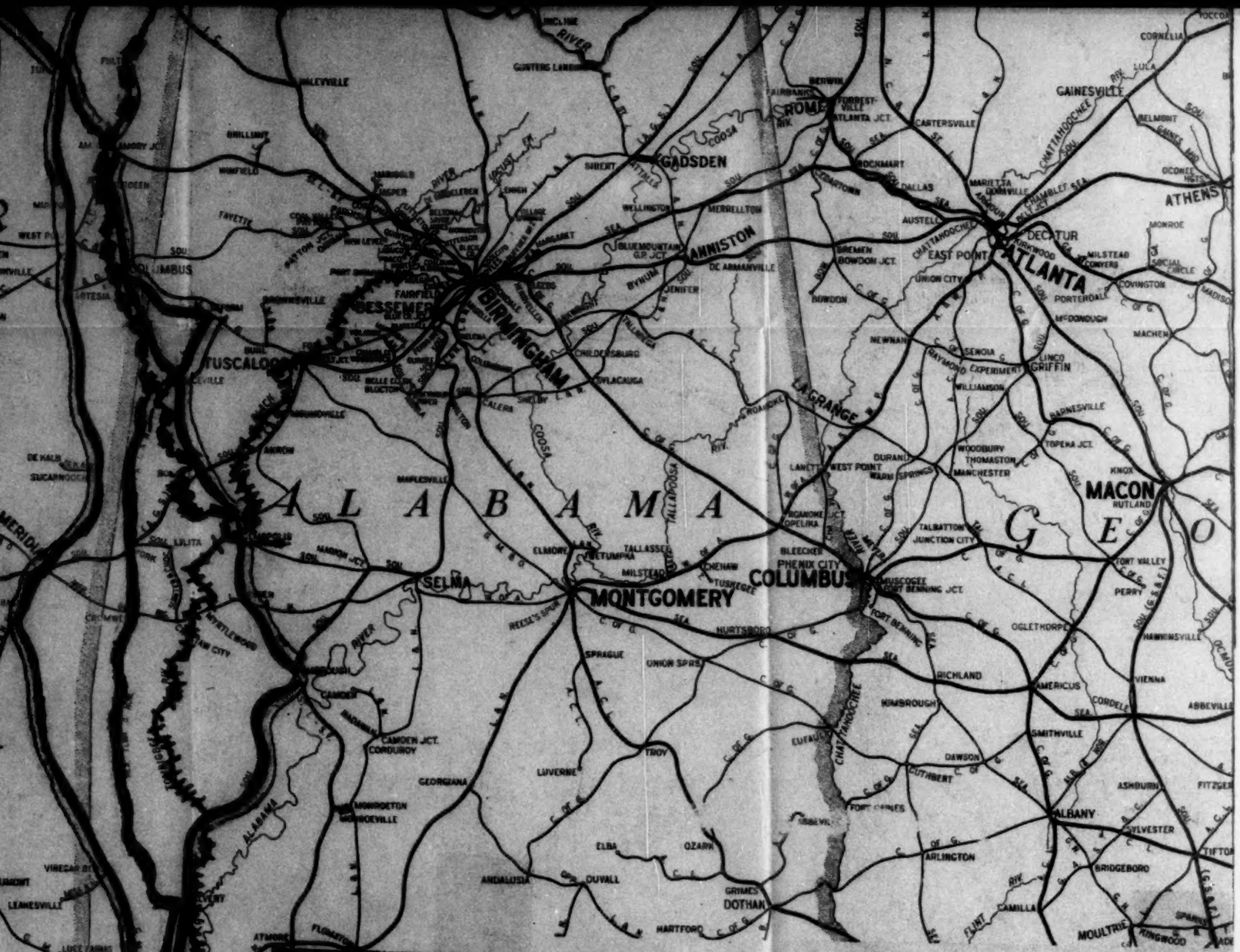


Railroad Map

Corrected to Jan. 1, 1950

RAIL FACILITIES IN THE AREA OF THE PROPOSED

TENNESSEE-TOMBIGBEE WATERWAY

Main North-South Lines

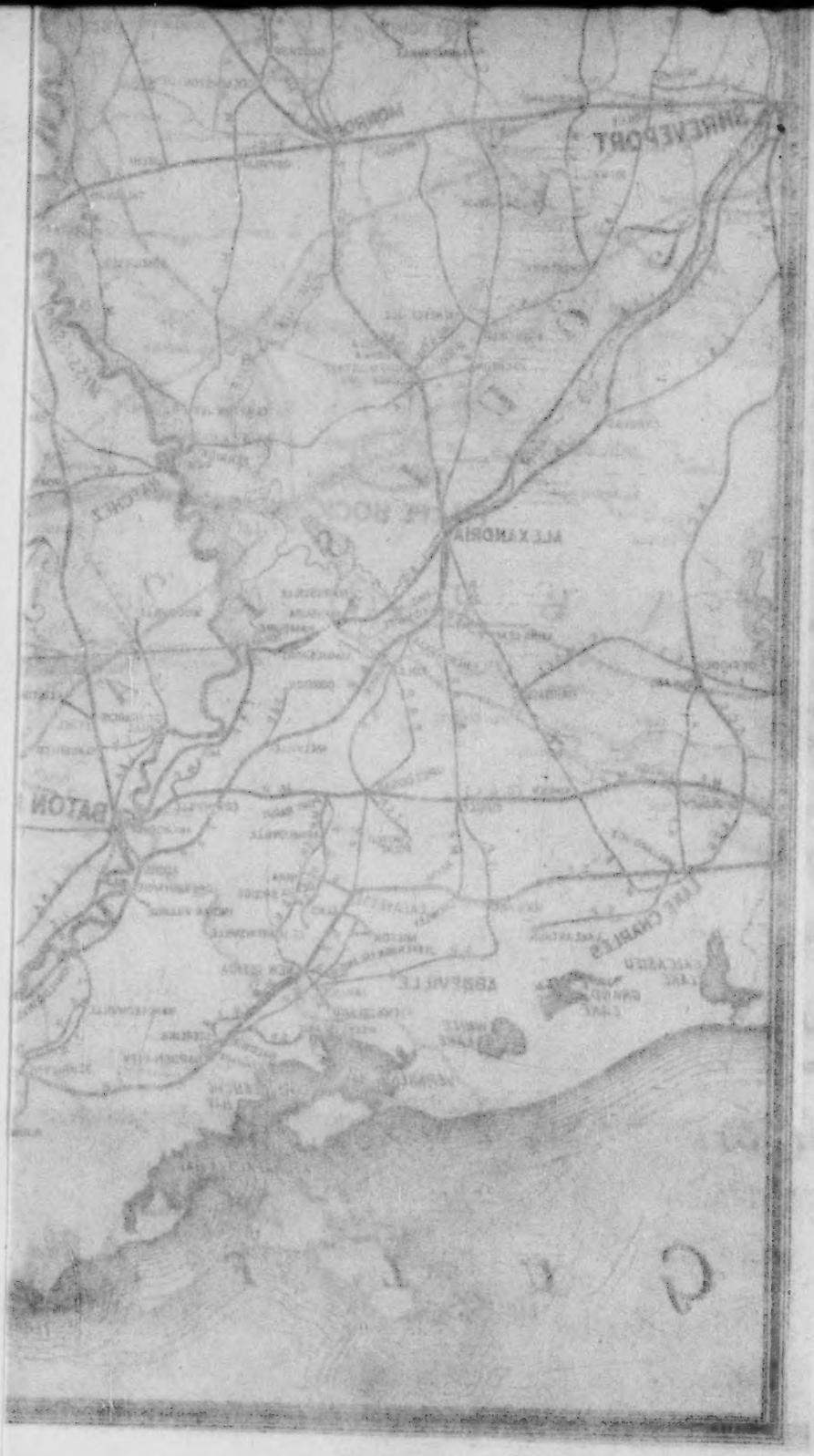
Lines connecting the Bauxite areas in Arkansas to plants in Alabama

Tombigbee River (presently unnavigable

Proposed channel cut joining Tombigbee with the Tennessee River

Tombigbee-Black Warrior System

Length of proposed Tombigbee project is 260 miles.


SHREVEPORT
MONROE
ALEXANDRIA
BATON
LAKE CHARLES
ABBEVILLE

6. *Analysis of other data sheets.*—There have been returned to Mobile 1,086 data sheets, either blank or containing some observation other than opposition. In fact, 703 comment, but report no tonnage. Of the comments that may appear to be pertinent from a particular standpoint, I quote as follows:

"We believe that this project would be of great benefit to this area in meeting transportation conditions of in-bound and out-bound material. We regret, however, that we are unable to give any estimated tonnage figures" (DS–3).

"We do not have any prospective movement of cement via rail-water at the present time" (DS–21).

"We have no comments to make on this proposed waterway, as we do not have anything to ship that way" (DS–58).

In view of the general knowledge of operations by the various petroleum interests, it is difficult to understand the lack of interest. Only two small producers report. The major concerns brush the project aside without indicating opposition or favoring the construction. Perhaps it is because a certain traffic manager testified before a congressional committee not so long ago that his company did not undertake to pass the savings along to the public. In any event, it is common knowledge that all the major oil companies (refiners) are using waterways very generally and for very great distances. Of course, many of them take advantage of their waterway potentialities to compel reductions in rail rates. This is true of several other industries, such as coal and coke, as well as iron and steel and articles manufactured therefrom.

C. N. THOMPSON.

AVAILABILITY OF TRUNK-LINE RAILROADS

Mr. DONNELLY. Now, for the benefit of the committee, I had this map drawn [going to the board]. The purpose of this map is to show the availability of railroads in the area covered by the project. We find here with respect to railroads, the proposed Tennessee-Tombigbee is indicated in red. You can see that there are two major trunk-line railroads that parallel the proposed project. One moves from Mobile on the east side of the proposed project and goes over to Memphis and on up to St. Louis, and the other goes up on the west side of the proposed project, all the way up to a junction here just below the Kentucky line, and part goes to St. Louis and the other up to Chicago.

(The map is herewith inserted.)

PREDICTED MOVEMENT OF BAUXITE AND ALUMINA

Now, in the commodity which the engineers predict will move on the Tennessee-Tombigbee, we find bauxite. You will find in 1947 that the engineers estimated 800,000 tons of bauxite will move. Mr. Faison probably will want to follow this.

Alcoa has a plant here at Mobile which processes bauxite into alumina. That alumina is then moved by rail up to Alcoa, Tenn., which is here [indicating].

The investigative staff interviewed the Alcoa Co. officials. They will not use the proposed Tennessee-Tombigbee, although the engineers say there will be 800,000 tons of alumina to move up the proposed waterway.

The Alcoa, Tenn., plant is some one and a half miles distant from water. The significant thing, however, is alumina is not conducive to water transportation. Alumina is a fine powder-like substance, and they have had to construct special railway hopper cars to move the alumina. No one has yet constructed a barge that will transport alumina.

Mr. RABAUT. That is the reason they will not use it?

Mr. DONNELLY. The alumina just cannot be moved by water unless very expensive equipment is designed. As a matter of fact, Alcoa owns its own railroad cars and rents them to the railroads, and then when they get alumina up to Alcoa, Tenn., on the return trip, if they do not deadhead the cars back, if they use them for anything, including cement, when the cars get back to Mobile, they have to be sandblasted before alumina can be loaded into them.

Let us take Reynolds Metals Co. The Reynolds Metals Co. produces bauxite over here at a place out of Little Rock, Ark., called Jones Mill, and there are two railroad points nearby, Bauxite and Bauxite Junction. You can see by the green line that the bauxite moves straight across, east-west, as the crow flies, to the Reynolds processing plant at Lister Hill, Ala., which is at Muscle Shoals.

The engineers have predicted with respect to bauxite that 800,000 tons are going to move annually up the Tennessee-Tombigbee. I would like to ask Mr. Faison where the 800,000 tons of bauxite is going to come from.

Mr. FAISON. Again, I want to say that we are not talking about 1949; we are talking about 1989. The high-grade bauxite from the Arkansas fields, which is really supplying, as far as I know right now, most of the requirements of all the aluminum companies, Alcoa and Reynolds, will be exhausted between 10 and 12 years from now, and we are talking about 60 years from now. The sources of bauxite are going to be foreign and they will come into Mobile, and as far as the alumina not being a transportable commodity in barges, there is not the slightest reason why barges cannot be conditioned to carry almina. We have a representation from the Tennessee Valley Authority that if the Tennessee-Tombigbee waterway is constructed, they will be interested in the movement of alumina to these plants, both at Lister Hill and the Alcoa plant. At Granite City they have a big stock of bauxite that they are trying to keep up for strategic purposes. All that has to come from somewhere, but not this year. It will come a long time from now when this waterway is in operation. That is all I have to say.

Mr. DONNELLY. You are speaking of 40 years hence. The estimated life of the project is 50 years, is it not?

Mr. FAISON. What I mean to say is that would be the upper limit. I believe the general has testified we could put it in operation in 5 years, if you let us start on it.

General PICK. What you mean is that the estimate you are talking about is what you expected to be carried over the waterway through the economic life of the project?

Mr. FAISON. I put that into the record over and over again.

Mr. DONNELLY. I have statistics here from the Corps of Engineers that show that aluminum ore, concentrates, base alloys, and scrap moved inland from Mobile, which is this point [indicating] up the existing Warrior waterway.

In the year 1950—and this is based upon the annual report of the Chief of Engineers—there was received at Mobile, from foreign sources, 1,319,258 short tons. There was not a single ton of that which moved up inland by water. I would like to put this document entitled "Waterborne Commerce of the United States for the Calendar Year 1949, Annual Report of the Chief of Engineers, 1950," in the record at this point.

(The document referred to is as follows:)

Commercial statistics

[Source: Water-borne commerce of the United States for the calendar year 1949, Annual Report of the Chief of Engineers, 1950—pt. 2]

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MOBILE HARBOR, ALA.—Continued

Freight traffic, 1949—continued

FOREIGN IMPORTS

Commodity:

	Short tons
612. Aluminum ore, concentrates, base alloys, and scrap	1,319,258

Page 717

BLACK WARRIOR, WARRIOR, AND TOMBIGBEE RIVERS, ALA.—Continued

Freight traffic, 1949—continued

(NOTE: There is no entry for commodity item No. 612 (aluminum ore, etc.); indicating no movement of aluminum ore on this waterway inland from Mobile.)

Page 1634

PORT OF NEW ORLEANS, LA.—Continued

Freight traffic—continued

FOREIGN IMPORTS

	Short tons
612. Aluminum, etc	371,281

Page 1630

PORT OF BATON ROUGE, LA.—Continued

Freight traffic—continued

FOREIGN IMPORTS

612. Aluminum, etc	545,378
Total	916,659

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MISSISSIPPI RIVER, MINNEAPOLIS, MINN., TO MOUTH OF THE PASSES (CONSOLIDATED REPORT)—Continued

FOREIGN IMPORTS

	Short tons
612. Aluminum, etc	916,659

(NOTE: These figures indicate no movement of aluminum upstream on the Mississippi River beyond Baton Rouge, La.)

Mr. FORD. That is alumina?

Mr. DONNELLY. Aluminum ore, concentrates, base alloys, and scrap.

Mr. BETZLER. Will you please read the last statement you made about the imports?

Mr. DONNELLY. According to the figures of the Chief of Engineers in his 1950 report, there was received at the port of Mobile, Ala., 1,319,258 short tons of aluminum ore.

Mr. BETZLER. Did that come from Bauxite, Ark.?

Mr. DONNELLY. It came from Jamaica and the other fields in the Caribbean.

Mr. BETZLER. That is the 800,000 tons.

Mr. DONNELLY. That is the 800,000 tons?

Mr. BETZLER. In the future, we are going to get 800,000 tons.

Mr. DONNELLY. The bauxite that comes here is processed by Alcoa at the processing plant at Mobile, and it is processed into alumina.

Mr. BETZLER. That is correct.

Mr. DONNELLY. None of it moves inland by water?

Mr. BETZLER. That is correct.

Mr. DONNELLY. And alumina is not adaptable to water transportation, is it?

Mr. BETZLER. It should be, for this reason: Marquette Cement Co. moves cement, and they pump it in and out of the barges. They can pump alumina in and out of the barges.

Colonel POTTER. They have somewhat the same characteristics.

Mr. BETZLER. There is no reason why it cannot be done.

Mr. DONNELLY. Let me ask you this: With respect to bauxite which is received on the Gulf coast from foreign sources and processed in the State of Washington by the big companies, that is now moving by rail instead of by water, is it not so that the aluminum companies have found it is not profitable or feasible to take it by the all-water ocean route, through the Panama Canal and up the west coast to the State of Washington?

Mr. BETZLER. That is their practice now. The idea is, the northwestern plants were not built on as permanent a basis as the central plants. That has something to do with it. The reason that you do not have any alumina going up the Warrior River now is that you do not have any plants. Your plants are up on the Tennessee, and you cannot move it up the Warrior now to get it on the Tennessee River. That is one reason that you do not have any going up there now.

Mr. DONNELLY. I can see that Lister Hill, which is Reynolds' plant, is on the Tennessee. The Alcoa plant is 1½ miles from the nearest waterway.

Mr. BETZLER. Pardon me. If it went by water it is now received at Mobile and it would have to go around the Mississippi to get up there.

Mr. DONNELLY. It is processed into alumina at Mobile.

Mr. BETZLER. That is correct.

Mr. DONNELLY. Suppose I read the statement by the Aluminum Corp. of America. They handle the material and know what it is.

Mr. BETZLER. Do they say they do not move any on the Mississippi River?

Mr. DONNELLY. Alcoa says that alumina cannot be moved by water, has not been and will not be.

Mr. BETZLER. Now, bauxite——

Mr. DONNELLY. Bauxite is something else. Alcoa has its bauxite plant at Mobile.

Mr. BETZLER. And Alcoa has a plant at East St. Louis.

Mr. DONNELLY. Here is a statement which the Alcoa executive made to a committee investigator.

(The statement was read, as follows:)

The only commodity which the company might move over the Tennessee-Tombigbee waterway is alumina. The principal reason for not favoring water transportation is the fact that alumina, due to its powderlike fineness, is not conducive to barge transportation. No barge equipment of the hopper type has been built which would meet the specifications required to ship this commodity by water. The possibility of constructing barges of a type that could be utilized for shipments of alumina has been explored by the company in discussions with barge operators and consideration has been given to the movement of alumina by water from Mobile to the company's plant at Vancouver, Wash. In this connection, Mr. Vance related that one of the railroad companies, upon learning that the company was considering movement of alumina by water, inquired as to what rail rate would be sufficiently attractive for the company to continue its shipment of alumina from Mobile to Vancouver, by rail. A rate was agreed upon which was lower than existing rate which is considered to be less than the cost to ship by special designed barges over the all-water route from Mobile to Vancouver.

Since barge transportation, if used, would require an extra unloading and reloading and drayage cost to the plant, together with construction of adequate dock facilities, the cost involved in Mr. Shepherd's opinion would not justify whatever savings might accrue if shipments were made by water instead of rail or truck. Furthermore, the waterway above Knoxville to the closest point to the company's plant does not exceed a 6-foot depth, which is too shallow for barge transportation.

Mr. Shepherd stated that his company exports very little and would not use the Tennessee-Tombigbee waterway for south-bound shipments.

Mr. KERR. Where did you get that statement?

Mr. DONNELLY. This was made to a member of the committee staff by an executive of Alcoa.

Mr. BETZLER. Would you mind telling us the date of it?

Was that rate adjustment for the movement of alumina from Mobile to Vancouver?

Mr. DONNELLY. Yes.

The date was December 1950.

Mr. BETZLER. That has nothing to do with this project. Mr. Rabaut. Is anybody moving this alumina by water?

Mr. DONNELLY. Alumina; no, sir.

Mr. RABAUT. How do they move it in boxcars?

Mr. DONNELLY. They have specially designed hopper-type railroad cars, and that is how it is moved.

I also have statistics here which show that no bauxite has been moving on the Mississippi River.

I think the committee will be interested in the commercial statistics of the Chief of Engineers for 1949 on the Mississippi River.

There was received at the port of New Orleans, item 612, which is aluminum ore, concentrates, base alloys and scrap, foreign imports, 371,281 short tons. Then there was received at the port of Baton Rouge, which is an oceangoing port, 545,378 short tons of foreign imports, or a total of 916,659 tons of aluminum ore. However, none of that moved up the Mississippi River, not one ton, according to these statistics which I would like to put in the record at this point.

(The statistics referred to are as follows:)

COMMERCIAL STATISTICS

[Source: Water-borne commerce of the United States for the calendar year 1949, Annual Report of the Chief of Engineers, 1950—pt. 2]

Page 706

MOBILE HARBOR, ALA.—Continued

Freight traffic, 1949—Continued

FOREIGN IMPORTS

Commodity:

	Short tons
612. Aluminum ore, concentrates, base alloys, and scrap	1,319,258

Page 717

BLACK WARRIOR, WARRIOR, AND TOMBIGBEE RIVERS, ALA.—Continued

Freight traffic, 1949—Continued

[NOTE.—There is no entry for commodity item No. 612 (Aluminum ore, etc.); indicating no movement of aluminum ore on this waterway inland from Mobile.]

Page 1634

PORT OF NEW ORLEANS, LA.—Continued

Freight traffic—Continued

FOREIGN IMPORTS

	Short tons
612. Aluminum, etc	371,281

Page 1630

PORT OF BATON ROUGE, LA.—Continued

Freight traffic—Continued

FOREIGN IMPORTS

612. Aluminum, etc	545,378
	916,659

Page 1572

MISSISSIPPI RIVER, MINNEAPOLIS, MINN., TO MOUTH OF THE PASSES (CONSOLIDATED REPORT)—Continued

FOREIGN IMPORTS

	Short tons
612. Aluminum, etc	916,659

(Note.—These figures indicate no movement of aluminum upstream on the Mississippi River beyond Baton Rouge, La.)

General PICK. I cannot challenge your statement there, but I hear rumors back here saying that it moved to St. Louis. Now, I ask my people if there is anyone who can testify to contradict that statement?

Mr. MALONE. Bauxite ore, with reference to movement on the Mississippi River, has moved in considerable quantity, and I think if you will review back through the Engineer Corps statistics you will find that it has moved and moved regularly until the railroads put in a very low reduced rate.

Since that time the movement has fallen off. At the present time, there is an effort being made by some of the barge lines to get that

movement back on the river again by quoting lower rates. Now, as to what the present status of it is, I think there is some moving this year.

Mr. DONNELLY. These figures are the latest of the Chief of Engineers. They are for the calendar year 1949. There is a processing plant of bauxite into alumina at East St. Louis.

Mr. MALONE. That is right.

Mr. DONNELLY. And that in 1949 moved entirely by rail; did it not?

Mr. MALONE. That is right.

The railroads got a very low reduced freight rate.

General PICK. Did they move any up there?

Mr. MALONE. It moved in 1946, and 1947, and I think that you will find in our engineering statistics we had a movement in 1948. That was prior to the time that the low rate went into effect.

Mr. FORD. It might be helpful to have those figures, whatever they may be, included in the record.

Mr. MALONE. I will get those and put them in the record.

Mr. DONNELLY. They will be official figures of the Corps of Engineers?

Mr. MALONE. They will come from the commercial statistics of the Corps of Engineers.

Mr. DONNELLY. The same document that I referred to for prior years?

Mr. MALONE. That is right.

Domestic shipments of bauxite by barge on Mississippi River

Calendar year:	*Short tons*	Calendar year—continued	*Short tons*
1931	16,062	1941	-------
1932	11,681	1942	-------
1933	(1)	1943	-------
1934	12,279	1944	-------
1935	11,491	1945	-------
1936	25,537	1946	72,707
1937	-------	1947	174,904
1938	-------	1948	125,327
1939	-------	1949	178,305
1940	-------		

[1] Not segregated.

Source: From Annual Reports of Chief of Engineers, U. S. Army, pt. 2: Commercial Statistics.

Mr. DONNELLY. The Corps of Engineers have estimated with respect to fertilizer 275,000 tons would move up this proposed waterway.

Colonel POTTER. I think the committee should take cognizance of the fact if the railroads do reduce their rates that is a saving to the public due to the existence of a waterway.

Mr. RABAUT. That is true.

Mr. DONNELLY. With respect to fertilizer, who made the computation with respect to the savings of 275,000 tons of fertilizer that would be moved on the proposed waterway?

General PICK. Who made the study on fertilizer?

Mr. MALONE. That was made by the same unit. I had a part in the study on fertilizer. The original 1945 estimate of 271,000 was increased to 275,000, or 4,000 tons more in the 1947 study. This was done after both a field investigation and the use of "specific commod-

ity requirement" studies throughout the area which would be served by the Tennessee-Tombigbee route.

When I speak of the "specific commodity requirements" study, we went into a detailed study of what fertilizers were used in the area extending north of the Tennessee River, including Tennessee, Kentucky, Illinois, Indiana, Iowa, Missouri, Wisconsin, and Minnesota.

The points in those States were studied that could be reached by water if it originated, say, at Gulf ports and used the Tennessee-Tombigbee route. We found in our analysis that 275,000 tons of fertilizer represented only a very small proportion of the amount of basic fertilizers that are used annually in each one of these States north of the Tennessee-Tombigbee route.

I might add that, within the 275,000 tons of fertilizer, that is not entirely the manufactured fertilizer. We were aware, and took cognizance of the fact, that the processed or manufactured fertilizers, consisting of the basic ingredients——

Mr. KERR. There are a half dozen different ingredients.

Mr. MALONE. It is manufactured throughout the country in small plants.

Mr. KERR. Now, they make the chemicals in each State. There is probably more fertilizer sold in North Carolina than in any other State, and we make ours.

(Discussion off the record.)

Mr. MALONE. In the estimate of 275,000 tons of fertilizer, there is included such commodities as ground phosphate, and some of the imported nitrates that can and do move in large volume.

We found in the territory adjacent to the waterway that could be served by the Tennessee-Tombigbee route that there is about 1,200,000 tons annually of the basic fertilizers, such as ground phosphate, applied directly to the soil that is used every year.

Now, 275,000 tons of what we have called fertilizer in this report consists of a great deal of that type of fertilizer, and represents only a small proportion. Acceptance of that figure, though, was subjected to a very minute detailed analysis that would show what our annual consumptive requirements were before we took the amount of 275,000 tons that could and would move over that waterway, for the reason that our sources of that particular basic fertilizer material today are the Gulf areas.

Our phosphate comes from Florida, and our nitrate is imported from South America.

Mr. DONNELLY. You have included phosphate rock entirely separately from fertilizer, 400,000 tons of phosphate rock, and 275,000 tons of fertilizer.

Mr. MALONE. That is true.

Mr. DONNELLY. So you have treated one ingredient separate from the fertilizer?

Mr. MALONE. That is true.

Mr. DONNELLY. Let me read you a statement and ask you whether you agree with it. This is a statement made by the Southern Cotton Oil Co., New Orleans, La., the largest producer of fertilizer in the United States. This company—

advised that fertilizer is not a product that ordinarily moves by water since the quantities sold are usually in carload lots which move by rail. Most purchasers will not buy more than 10,000 pounds at a time and rail rates are so low due

to truck competition that water-borne transportation is considered out of the question. This company has tried water transportation but found it unprofitable.

Do you want to make any comment on that statement, sir?

Mr. MALONE. I would like to, please. I happen to personally know the gentleman with the Southern Cotton Oil Refining Co. who is now promoting their fertilizer business throughout the United States, Mr. Gohegan. First, I disagree with the statement that they are the largest commercial manufacturers of fertilizer in the country. It is true, insofar as his statement goes, that the manufactured fertilizers do not move any great distance either by rail, water, or other means. If it is in the finished product the average haul is possibly not over 100 to 150 miles, generally, but the basic ingredients that go into this fertilizer, such as your phosphate, your nitrates, your sulfate of ammonia, and your potash do move long distances, and where they can use a waterway, I think you will find they are using a waterway to a great extent. We have phosphate moving up the Mississippi River today, even though they are having very low reduced rail freight rates.

I would like to add one more statement there that in dealing with the phosphate rock we would have a total of 400,000 tons of this commodity move by the proposed water route in the 1939–40 study. This estimate in our review and investigation and study before we accepted it was based on the following requirements:

The Tennessee Valley Authority alone estimated an increase in the purchase of Florida phosphate to supplement the fast-diminishing supply of Tennessee phosphate at the Muscle Shoals plant. They indicated to us that with as much as $1 a ton savings that they would increase their use of Florida phosphate by 400,000 tons annually.

I see in 1947 they did move in 160,000 tons that year of Florida phosphate. The use of the Tennessee-Tombigbee to Muscle Shoals would give them a direct low-cost route which they felt would warrant their purchase of 400,000 tons of this per year alone.

In addition to the TVA requirements it was found in 1950 alone that ground phosphate, which is applied direct to the soil in basic form, within the States which I have enumerated amounted to over 650,000 tons alone. That is over and above the TVA requirements.

In addition to that, we find in our investigations that a great deal of the phosphate now mined in Florida is being made into superphosphate right down at the plants in Florida.

Now, superphosphate we find will move a considerable distance either by water or by rail, and is different in that respect from the so-called mixed fertilizer of which we have local plants scattered throughout the United States manufacturing it.

So, all told, we find 800,000 tons of phosphate rock, of which TVA had indicated themselves that they would take 400,000 tons of it. We find that the requirements for phosphate rock basically applied to the soil in the States affected by the Tennessee-Tombigbee River amounted to more than 650,000 tons, not including the phosphate that goes up there for particular fertilizer manufacture, such as is distributed locally. So, actually there is better than 1,000,000 tons of phosphate rock used yearly, or that could be used yearly in that particular territory, and it is increasing every year as the agricultural requirements demand more and more fertilizer.

So, that was the basis for the assumption of the 400,000 tons.

Mr. DONNELLY. Let me read you a statement of the Virginia-Carolina Chemical Corp.:

> The major commodity produced by the Virginia-Carolina Corp. is fertilizer. The company has 36 processing plants in the United States with several plants located in Alabama, Georgia, North and South Carolina. Fifty-five percent of the company's production of superphosphate moves by truck over short distances to consignees in that area and no shipments are made in larger than carload or truckload quantities. This item, according to Mr. Alfrend, is not conducive to bargeload shipments and the company would not use the proposed waterway if constructed.

Do you want to comment on that?

Mr. MALONE. I would like to say for the Virginia-Carolina Chemical Corp. that a great amount of their basic phosphate rock comes in today from Tampa, Fla., coastwise.

General PICK. Over what waterway?

Mr. MALONE. They will use the open water to Atlantic ports and the Intracoastal Canal by barge in bringing it to such points as Wilmington where it is manufactured into fertilizer, and the same is true of Baltimore where they bring phosphate rock up by vessel.

OIL FROM MISSISSIPPI FIELDS

Mr. DONNELLY. There is only one other question that I wanted to ask you, Mr. Malone. With respect to the oil that is produced in the Mississippi field, is it not true that that oil is taken to Baton Rouge where it is refined and then it is piped by pipeline?

Mr. MALONE. A recent investigation made down in that area shows that a great deal of that oil today is moved down to the Gulf by rail and is being loaded onto tankers and moved to the Atlantic coast. Some of that oil today is being loaded on the Tombigbee River and taken as far up as they can get their barges, and brought to the two refineries in operation at Tuscaloosa today. I understood from a recent visit down in that area that the Gulf Oil Co., now, by reason of not having water up to some of their fields, is building a pipeline down to the Gulf.

There also came to my attention a new field farther south in Alabama which the State geologist is rather optimistic will exceed the production of the present field in the upper region of the Tombigbee, extending from Mississippi over into Alabama. There have been one or two wells brought in, but they are optimistic it will be even larger than the present field.

Mr. DONNELLY. I have no further questions to ask. That is all unless the committee has some questions it wishes to ask.

Mr. KERR. Do you want to ask any questions, Mr. Ford?

Mr. FORD. Have we finished the Tombigbee project?

Mr. DONNELLY. I think we have. We have other matters we can go into, but I think it is better to conclude at this point.

Mr. FORD. I would like to ask several questions, then.

METHOD OF COMPUTING BENEFITS ON WATERWAY PROJECTS

During the hearings we had on the civil functions appropriation bill this year this particular booklet was called to my attention. It is entitled for identification purposes, "Report to the Federal Inter-

agency River Basin Committee, Proposed Practices for Economic Analysis of River Basin Projects," prepared by the Subcommittee on Benefits and Costs, and is dated May 1950.

I notice that those who cooperated in the preparation of this are as follows:

The Corps of Engineers, the Department of the Interior, the Department of Agriculture, the Department of Commerce, and the Federal Power Commission.

Mr. RABAUT. Who prints it?

Mr. FORD. Pardon me?

Mr. RABAUT. Who prints it?

Mr. BEARD. It was printed by the Government Printing Office for the Inter-Agency Committee.

Mr. FORD. As I gather it, these recommendations were made by a number of men appointed from each of the agencies mentioned. I will not fill the record with the names, but they seem to be individuals holding very responsible positions.

During the hearings I noticed some paragraphs in reference to navigation, and turning to page 46, under chapter IV, Application of Principles to Various Project Purposes, I think there is some material in here that might bear investigation, and may be some interrogation by this committee.

As I gather it, these agencies got together and went into this question of benefit-to-cost very, very thoroughly, and they came up with recommendations for all agencies in the Federal Government, and I think we ought to maybe have Mr. Donnelly and his staff see what these recommendations are and make inquiry of the Corps of Engineers as to whether or not they are following these practices, and whether they think they should be followed in the future.

I notice one statement here, for example, and I quote from page 46:

> From a public viewpoint, a navigation project will be beneficial if it results in provision of needed transportation service at less total cost (project and associated) than may be expected to be necessary for such service in the absence of the project.
>
> On the above basis, transportation costs, rather than transportation rates (i. e., costs to shippers), should be used for measuring benefits whenever possible.

In other words, I think that some of this material in here may be entirely relevant to what we have been going into during these hearings.

Mr. DONNELLY. Congressman Ford, the procedures outlined in that book were the procedures used by the committee's investigative staff in computing the cost-to-benefit ratio, particularly transportation benefits. I anticipated your question, to some degree, by going into these various items of estimated cost. I should be glad to go into them further.

Mr. FORD. I think it might be well worth while.

General PICK. In reference to the subject brought up by Mr. Ford, bearing on this document here, I would like to point out that this study has been going on for several years, and this has been proposed by the committee appointed by the Inter-Agency Committee to work it up. It has not been adopted. It is under consideration now.

Mr. George Beard, who is here, has had a considerable amount to do with this. You were on this committee, were you not?

Mr. BEARD. Yes, sir.

General PICK. Would you care to make any statement on this, on the present status of this particular document?

Mr. BEARD. This pamphlet was finished and printed in this form in, I think it was, May of last year. It is not a public document, although it was actually printed on the press of the Government Printing Office.

The various participating agencies named in the front then took it and distributed it to their various field offices for comment, to determine how these various field officers would put it into practice, and what they thought as to its actual practical applicability.

All of the agencies received comments which were again considered by the subcommittee that prepared this, and there were several points which the field officers brought to our attention stating that they would not be very workable and, furthermore, that they would not be workable except with changes in basic legislation applying to the various agencies.

For the last several weeks or months the subcommittee has been working a great deal of this material over further with a view to coming out with something quite soon that will be applicable and workable for the agencies.

This whole thing started with recognition of the fact by the Inter-Agency Committee that there were discrepancies and differences, at least, between the practices of the various agencies which, if they could be resolved and put into entirely usable form would probably improve the Government's whole water resources program, and it was with the objective of that improvement that we went into this effort, and are still working on it.

Mr. FORD. I gather from what you stated, then, Mr. Beard——

Mr. BEARD. Yes .

Mr. FORD. That theoretically those recommendations are wholly desirable. The question is whether, from a practical point of view, under the present legislative situation they can be used.

Mr. BEARD. I would agree with that with one qualification, Mr. Ford. You say theoretically they are wholly desirable. Theoretically from an economics standpoint they are quite desirable, but there is a whole lot more in this subject of water resource development than the pure economics. Economics is the basis of this whole study as the title indicates.

Mr. KERR. Do you have anything in there about the Tombigbee project at all?

Mr. BEARD. No, sir; not a thing.

Mr. DONNELLY. I think, Judge, the relevancy here, and I am sure it has direct relevancy to what is before the committee, is the fact that the President, by directive, ordered the Inter-Agency Committee——

General PICK (interposing). No.

Mr. DONNELLY. Was there not a directive outstanding from the President's Water Resources Policy Commission requiring that that document be finalized by December 31, 1950?

Mr. BEARD. No. I can explain that, if you wish me to, Mr. Chairman.

The President's Policy Commission as part of its job was working on a study very similar to the one the Interagency Subcommittee was working on. The same group of people were asked to assist the Policy Commission in its study, and the Commission informally asked the

subcommittee if we could not finish this up in time for them to use, their deadline having been set by the President as December 1950. So, we did hasten the conclusion of this and got this study entirely finished by May of last year.

Mr. DONNELLY. Which committee had the deadline?

Mr. BEARD. The President's Water Policy Commission.

Mr. DONNELLY. The President's Water Resources Policy Commission?

Mr. BEARD. That is right.

Mr. DONNELLY. Do you know the extent to which this was adopted or not adopted by the President's Water Resources Policy Commission when it filed its report?

Mr. BEARD. Yes; there is a section in the book we had here this afternoon on that. I hesitate to paraphrase it, but my own opinion of what they said is this: The Policy Commission gave recognition to the subcommittee's proposals and mentioned them, and then more or less tossed them aside as being extremely conservative, and altogether too conservative for the Policy Commission to adopt.

Mr. FORD. What do you mean by being too conservative?

Mr. BEARD. I think I could turn to the page there if I could have that book again. It will take me a few moments to find it.

There are several pages in the Policy Commission's report beginning on page 55 of volume I. As I said, there is a quotation from the subcommittee's report of the Inter-Agency Committee, and that is just about the entire use that was made by the Policy Commission. From there on they go on and discuss their own ideas on these studies of the evaluation of projects. By comparison of the two it is clearly evident that the Policy Commission of the President rejected the conservative approach that is embodied in this report of the Inter-Agency Subcommittee. They did not say it in those words. You have to read the two and compare the text of the two, but as I said a moment ago that is my own conclusion as to their rejection of this report.

Mr. FORD. I ask you as a matter of opinion now, and I do not expect anything else. Would you say that the recommendations of the President's Water Policy Commission would more nearly conform to the policies now in effect in those four agencies, or would the President's Water Policy Commission recommendations more nearly conform to what is recommended by the Inter-Agency Committee, just as a matter of opinion?

Mr. BEARD. My opinion, Mr. Ford, is that the recommendations of the President's Policy Commission are more liberal than either the current practices of the Corps of Engineers or the practices recommended in this book, in the Inter-Agency Committee's book.

Mr. FORD. In practical effect, then, the recommendations of the President's Water Resources Policy Commission would mean that there would be greater possibility that more projects would be recommended to Congress for appropriations?

Mr. BEARD. Yes, that is my opinion of it; yes, sir.

Mr. FORD. I would like to ask perhaps General Pick this question, or perhaps Colonel Potter.

General PICK. I will try to answer it.

Mr. FORD. According to this chart, which we used earlier in the hearings, the first request by the Corps of Engineers to the budget for any funds for the Tombigbee project came in 1948, for the fiscal

year 1948, is that correct, $850,000 for planning was requested by the corps in that year?

General PICK. That is what is shown on this table, sir.

Mr. FORD. And I am assuming that is correct. Actually, the Bureau of the Budget, for the fiscal year 1948, recommended $300,000 for planning?

General PICK. That is correct.

Mr. FORD. Whether we say that there was a definite project report, a definite project study, or something else, is it your recollection, or the recollection of anybody else, that the Bureau of the Budget ever asked the corps whether they had those things prepared?

General PICK. I do not know, sir. Of course, I was not here at the time, and I do not think there is anybody in this room—you were over there?

Mr. BEARD. I do not recall that they ever inquired into that.

General PICK. Is it customary for the Bureau of the Budget to ask us for definite project reports or studies?

Mr. BEARD. No, sir.

Mr. FORD. In other words, to the best recollection of anybody here the examiners for the Bureau of the Budget never ask the Corps of Engineers whether there was a project study or project report, or anything else comparable to it, at the time the request was made of the Bureau of the Budget for the Tennessee-Tombigbee River project?

Mr. BEARD. That is my best recollection; yes.

General PICK. It is customary for them to go over the project very carefully and question us as to the amount of work that can be done and the readiness in which we are to take up the work.

Mr. FORD. Did the budget, on any project today for the fiscal year 1952, ever ask for a definite project report, a definite project study or anything else in reference to any project?

General PICK. They have not asked me; have they asked you, Colonel Potter?

Colonel POTTER. To my knowledge it has never been mentioned by the Bureau of the Budget in any request for substantiation of amounts.

Mr. FORD. In the fiscal year 1949, in the fiscal year 1950, in the fiscal year 1951, or in the fiscal year 1952, did the Bureau of the Budget ever ask the Corps of Engineers whether there was a definite project study, a definite project report or anything else in reference to the Tennessee-Tombigbee project?

General PICK. Colonel Potter, you appeared before the budget.

Colonel POTTER. For the last 2 years they have not, Mr. Ford, and they recognize, as we do, that it is a tool of our Engineering Department, their main question is whether we are ready to start construction. Their examiners go into the report and the goodness of the project before they allow it in the budget.

Mr. FORD. But their examiners, speaking of the Bureau of the Budget, were never given a definite project study, a definite project report, or anything comparable to it?

Colonel POTTER. You are right, sir.

Mr. FORD. That is all.

Mr. RABAUT. Are there any further questions?

(No response.)

Mr. KERR. We will stand adjourned then, sine die.

APPENDIX

FEBRUARY 14, 1945.

Subject: General comments relative to the traffic movement on the Intracoastal Waterway between Mobile and New Orleans.
To: Mr. E. E. Bottoms.

1. The undersigned conferred with Mr. F. M. Rademacher, section head, permit, navigation, and safety section, Mobile district office, and Mr. Harry G. Locke (recently retired—see p. 8, col. 1 of Waterways Journal, dated February 10, 1945), this date, relative to the feasibility of using inland waterway equipment on the subject Intracoastal Waterway and the line haul costs (exclusive of terminal handling costs). The following opinions and facts were given or mutually concurred in by the afore-mentioned gentlemen:

(*a*) The project dimensions of the subject waterway (approximately 130 miles in length is 12 feet in depth (based on mean low tide), and a minimum width of 150 feet. There is one lock at New Orleans, of which they did not know the dimensions. (Shown on the Gulf Intracoastal Waterway map, dated November 1944, as 75 foot by 640 foot, with a depth of 31.5).

(*b*) Grand Island, Cat Island, Ship Island, Horn Island, Petit Island, Dauphin Island, etc., while furnishing a breakwater for the waterway, would not be suitable for harbors of refuge for the reason that the waters adjacent to same are very shoal for a considerable distance channelward. The dredging of a port into those islands would be impracticable, due to the fact that same would readily fill in.

(*c*) Inland waterways equipment can be used without detrimental effect on same in these waters. The average life of wooden barges used on this waterway (with reasonable amount of maintenance), is about 40 years and steel equipment would range upward from about 60 years. It is estimated that the over-all maintenance costs would increase slightly over that required for similar equipment operating in fresh water only. However, it was the consensus of opinion that going from salt water to fresh water would be beneficial in the respect that it would tend to rid the hulls of barnacles, etc.

(*d*) Relative to harbors of refuge, it is the opinion of the above-mentioned gentlemen that these would be unnecessary for the reason that ports sufficient in depth and width to harbor the towing vessel are available about every 20 miles on the coast and the barges could be anchored just outside of said ports with a reasonable degree of safety in the average blow. Winds of a higher velocity than average would be reported sufficiently in advance to afford the taking of necessary precaution by the operators such as delaying the trip, etc. The frequency of these necessitated delays could not be estimated. In this connection, attention was invited to the fact that at one time the consruction of a refuge harbor on Dauphin Island was contemplated by the Coast Guard but later abandoned.

(*e*) There was some question as to how many barges the average inland waterway towboat could economically handle across the subject waterway at one time. After considerable discussion, the consensus of opinion was that the average towboat could handle six barges per trip (average from 150 to 250 feet in length; from 25 to 40 feet in width; and 8 to 10 feet draft). The tows would differ from the inland waterways pusher type hook-up inasmuch as they would be towed behind the towing vessel and the lead or hawser on the tow would be contingent upon the conditions. The tow on an average could make from 3 to 4 miles per hour, and the average barge would carry 500 tons except petroleum barges which average about 10,000 barrels each.

(*f*) The opinion was offered that the shipment of petroleum, while this is presently the major traffic on the subject waterway, could not be depended upon for the reason that as soon the the war is over, this business will be handled by tankers or pipelines. However, at the present time, most, if not all the petro-

leum, originates west of New Orleans and the point of designation is east of Mobile. Also, petroleum is a one-way traffic inasmuch as the carrying equipment returns to point of origin empty.

(*g*) Cost data relative to line haul (exclusive of terminal or handling costs) were not available.

2. Considerable discussion was had relative to the type of commodities presently being carried over the subject waterway. In view of the fact that this is a matter of compiled record, it is not considered essential herein. The abovementioned gentlemen furnished the undersigned with a list of various operators interested in the subject Intracoastal Waterway for the purpose of further contact in this regard.

HOWARD J. SCHULTE.

FEBRUARY 15, 1945.

Subject: General comments relative to the traffic movement on the Intracoastal Waterway between Mobile and New Orleans.
To: Mr. E. E. Bottoms.

1. The following is a brief résumé of the opinions, etc., of interested parties contacted this date relative to the feasibility of using inland waterways equipment across the Mississippi Sound.

(*a*) Captain Eddy Buck, local manager for the Federal Barge Lines, Port of Saint Michael Street, Mobile Ala. This gentleman states that the average tow across the sound is six barges; approximately 500 tons per barge; towed on a hawser by tugs of approximately 900 horsepower. The captain states that inland waterways equipment can and is being used to navigate the Mississippi Sound. He agrees highly with the idea of establishing harbors of refuge along some of the islands and is of the opinion that the accomplishment of same would not be difficult in view of the fact that waters adjacent to the island, which are close to the route, are now of sufficient depth to accommodate a tow of 12-foot draft. The disadvantage to the operator at the present time is the lack of harbors of refuge which necessitate considerable delays as the vessels do not proceed across the sound until favorable conditions are predicted to last for the duration of the trip or about 35 hours. The captain states that the main difficulty now encountered by light river equipment is the breaking of tow couplings in the rough passes, otherwise the equipment stands up very well. In this connection, the captain pointed out that establishing a harbor of refuge on Grand Island would be too close to the canal to justify the expenditure but that Cat Island, Ship Island, Horn Island, Petit Bois Island, and Dauphin Island would be favorable as the waters around same were of sufficient depth to accommodate the tows and that this depth was of a permanent nature, that is the sand does not shift so as to fill in the harbors. The captain stated further that these islands furnish fairly good protection to the route at present, especially to south winds, but possible jetties could be constructed to furnish additional protection from the north winds during the winter months. The captain also stated that a fair percentage of the petroleum originating from the West was now going up the Mobile River and from conversations with various persons of his acquaintance, he felt that this business would definitely increase during peacetime. Voluntarily the captain referred to the possibilities of the Tombigbee project and said he thought it a very satisfactory project, and that there was no doubt in his mind but that it would furnish a decided savings to the public. Data relative to line haul costs was not available and the captain suggested that the undersigned contact Mr. Macheau of the Federal Barge Line office in New Orleans in this regard.

(*b*) The undersigned called on Mr. Owen Burke of the South Port Transit Co., Mobile, Ala. He stated, in view of the fact that he was operating on the rivers only, he did not believe he could furnish any worth-while remarks relative to operating on the Mississippi Sound.

(*c*) Mr. A. T. Beardslee, owner of the Beardslee Launch and Barge Service, Mobile, Ala. This gentleman stated that he definitely was not in favor of any great expenditure of money by the Government on the improvement of the Intracoastal Waterway. I informed him that the Board's interest was to gather facts and opinions as a matter of record and for economic study of all waterways so as to guarantee a good investment of public funds when and if such funds were expended. He stated that harbors of refuge constructed at intervals along the sound would be fine for the boat operators but he did not believe this would justify the necessary expenditure of public funds. He stated that

considerable delay to carriers was caused by not having harbors of refuge along the sound but these delays, in his opinion, would not justify constructing such harbors. He stated that he thought operators were attempting to cross the sound with tows too large which resulted in destroying channel markings, beacons, and equipment. According to Mr. Beardslee, considerable equipment is damaged due to collisions resulting from tows being too long to properly control. He stated that in his opinion two or three loaded barges could be economically towed across the sound at one time. Mr. Beardslee estimated that the average tow of two or three loaded barges could make from 3½ to 4 miles per hour across the sound. Mr. Beardslee could not furnish cost data relative to line-haul costs but suggested that the undersigned come back to see him at 3 p. m., February 16, 1945, at which time he desires that Capt. Mack Lipscomb of Mobile, Ala., sit in on the conference. Arrangement has been made for this conference and a résumé of same will be made in a subsequent report.

(*d*) Mr. H. A. Guthans, vice president of the Warrior Gulf Navigating Co. and also vice president of the Ohio Barge Line. This gentleman is of the opinion that inland waterway equipment is not structurally sound for navigating the Intracoastal Waterway. Mr. Guthans went into considerable detail in explaining his experiences in attempting to use inland waterway equipment across the Mississippi Sound. He explained that stern-wheel boats, as used on inland waterways, were not suited for operation in the sound for the reason that they could not actually tow on a hawser hook-up unless the wheel was partially covered and this procedure had been tried in several instances of which he was familiar and had never proven successful. Also, the tunnel type of inland waterway towboat, as presently constructed, was not structurally sound for operating in intracoastal waters for the reason that, from the sternward bulkhead to the actual stern of the boat the design of the tunnel decreases the buoyancy and creates a semivacuum between the tunnel plate and water, plus the weight of rudder, housing, etc., causing a cantilever action or strain on the hull, buckling the bottom plates near the sternward bulkhead. He also stated that the engine rooms, etc., would have to be better protected due to deck wash and that the housing on most river towboats was entirely too high for coastal winds and rough water. Mr. Guthans feels that Federal expenditure in maintaining waterways is becoming so great that economy is lost and same will eventually defeat the cause. Therefore, the gentleman is opposed to the expenditure of public funds for the purpose of constructing harbors of refuge along the Mississippi Sound but states that such harbors, if constructed, would lessen the present delays due to anticipated bad weather. Mr. Guthans voluntarily brought up the Tombigbee project and stated that in his opinion Mr. Rankin's pet idea was impracticable from every standpoint and if such a project was ever constructed no operator could stand the cost of so many lockages and ensuing delays. Mr. Guthans stated that his company considered the cost of towing across the sound to average about $0.50 per ton which included the return of the empty barge. However, if the vessel towed loaded barges both ways, the cost would decrease about 30 percent. The cost estimate furnished by Mr. Guthans includes only the towing vessel, as in most instances the barge and hawser lines, couplings, etc. are furnished. Apparently if the rental of the barge, insurance and miscellaneous supplies were considered, the given estimate of cost would increase considerably.

2. The above-mentioned Messrs. Guthans and Beardslee strongly recommended that the undersigned contact Capt. Mack Lipscomb relative to conditions, etc., on the Intracoastal Waterway as the latter-named gentleman is reputed to be an outstanding authority on conditions relative to the sound. Captain Lipscomb was indisposed this date, but an attempt will be made to contact him at a later date.

3. The undersigned obtained the information as given herein by direct questioning without any attempt to elaborate on or alter the views of any of the mentioned individuals. However, it will be noted from previous report, and statements contained herein that there is a wide diversity of opinions relative to the subject waterway.

HOWARD J. SCHULTE, *Engineer (Civil)*.

FEBRUARY 16, 1945.

Subject: General comments relative to the traffic movement on the Intracoastal Waterway between Mobile and New Orleans.
To: Mr. E. E. Bottoms.

1. The undersigned conferred this date with the following listed gentlemen relative to general conditions of the Intracoastal Waterway (Mississippi Sound) and for the purpose of obtaining their opinions relative to the feasibility of using inland waterways equipment on the subject Intracoastal Waterway and to ascertain an estimate of line haul costs (exclusive of terminal or handling costs):

(*a*) Mr. H. C. Jackson and Dr. J. C. Hope, owners of the Jackson Hope Towing Co., Mobile, Ala.

(*b*) Capt. Mack Lipscomb of Mobile, Ala.

(*c*) Mr. A. T. Beardslee, owner of the Beardslee Launch and Barge Service, Mobile, Ala.

(NOTE.—The undersigned previously conferred with the above mentioned Mr. Beardslee in regard to the subject waterway which is covered in a previous report. Mr. Beardslee arranged the meeting held this date for the reason that he was of the opinion that these gentlemen should be given an opportunity to express their viewpoints. Mr. Beardslee was particularly interested in the undersigned obtaining the comments of the above-mentioned Capt. Mack Lipscomb as he is regarded as the most outstanding authority in this locality on conditions, etc. of the Mississippi Sound. Several other gentlemen attended this conference as listeners only and consequently their names were not recorded.)

2. The following comments were made by the above listed gentlemen and in view of the fact that each statement was mutually concurred in individual comments in the following résumé of the conference are not referred to but rather an attempt is made to convey the general viewpoint.

(*a*) Information was furnished that intracoastal tows of petroleum were not permitted presently to use Gulfport for a harbor of refuge. However, these tows where permitted to go into the Gulfport Basin. (This restriction appears to be due to military activity at Gulfport and therefore is not thought to be a permanent restriction.)

(*b*) A storm warning flag and light are highly desired by these gentlemen on the Rigolets. A point was recommended for the flag and light which is known as Little Rigolets. The gentlemen called attention to the fact that the recommended point was about 30 miles east of New Orleans and would provide a warning about 4 hours out of New Orleans which would decidedly increase safety in their operations. The point recommended is inhabited and therefore a tender of the signal would be available. Also, another point was suggested for a storm-warning flag and light in the vicinity of what is known as Round Island Light. Boats seeking harbors of refuge after warning at this point could run into Pascagoula. A large percentage of the boats operating through the sound do not have ship-to-shore radios.

(*c*) It is the concensus of opinion that inland waterway towboats are not designed properly for use across the sound. It was pointed out, if towboats such as presently used on inland waterways were to run into a harbor of refuge, it would be necessary after a strong wind to wait until the sea "run-out" before they could proceed. The housing on river towboats is too high and too heavy sternward to endure the heavy rolls of the sound.

(*d*) Relative to constructing harbors of refuge along some of the existing islands, it is not believed to be a practical idea. Waters adjacent to the islands are of sufficient depth to permit tows to run-in at present and it is doubted if jetties, etc. would add greatly to the protection now furnished. It is believed that difficult crossings such as between Cat and Ship Islands, and Petit Bois and Dauphin Islands could not be safely made by the present river towboats at any time other than under ideal conditions. It is doubted if these crossings could be economically blocked off or protected from the sea and to do so would interfere with the regular ship channels. The type of barges, other than hopper type, presently used on inland waterways, can be safely towed across the sound. Hopper type barges cannot be safely towed across the sound due to high waves, etc. Considerable difficulty is encountered in protecting the rakes of barges when one empty is towed with a loaded barge. The difference in height of the barges exposes the rake of the empty barge to the battering effect of the loaded barge.

(*e*) The gentlemen estimated the present average tow across the sound to be approximately two barges. However, it is estimated that tugs of 500 horse-

power or more can handle five or six barges safely, and average from 3½ to 4 miles per hour across the sound.

(*f*) General comments were made relative to the present markings maintained across the sound by the Coast Guard. It is thought that too many of the markers were being destroyed by careless operators, and consequently, at times at least, there were not enough existing markers to insure safety. In the opinion of these gentlemen, the Coast Guard is doing a very good job of attempting to maintain adequate markings, but they do not have the manpower and equipment to repair and replace markers as fast as negligent operators destroy same.

(*g*) Conditions at the canal lock just east of New Orleans are good. Due to the present heavy traffic across the canal there is some congestion, but it does not appear to be serious.

(*h*) The average towboat makes a round trip per week across the sound. This average allows for delays due to bad weather conditions, breakdowns, general maintenance work, etc. The average cost per ton for towing across the sound is estimated by the above-listed gentlemen as being approximately $0.50 for the towing only. That is, usually the barge, hawser line, couplings, insurance, etc., are furnished. However, considering all costs (exclusive of terminal or handling costs), it is estimated to be about $1 per ton, which includes the return of the empty barge. If the barges are loaded both ways, that is, east-bound and west-bound, the cost per ton would decrease approximately 25 percent.

(*i*) Since the subject had not been discussed, I asked the above listed gentlemen if the Federal Barge Line used river equipment across the sound. I was informed that the barges were towed across normally by a larger towboat than the barge line used on regular river runs. However, it was believed that at times regular inland waterway towboats had been used when conditions were very favorable but considerable delays would be necessary from time to time to await such favorable conditions. Also, it was pointed out that the Federal Barge Line equipment was for the most part far superior to the average equipment used on the river.

(*j*) The above-mentioned Mr. Jackson stated during the conference that he presumed the undersigned was obtaining information to be used in connection with the Tombigbee project. The undersigned informed the group that he was aware of the Tombigbee project but that his assignment was to obtain information relative to the Intracoastal Waterway only as the Board felt that their problems could best be understood by obtaining information from men such as they who had first hand knowledge of the problems. Mr. Jackson then stated that in any case, he wanted to go on record as complaining about the condition at lock No. 1 on the Tombigbee River. He stated that his tugboat along with four other tugboats had been previously delayed at this lock for 5 days and that one of his tugs was at present trying to get through the lock and had been delayed 2 days up to the time of his statement. Mr. Jackson was aware of the fact that some work to correct this situation was contemplated in the near future.

(Reference is made in this connection to H. Doc. No. 382, 77th Cong., 1st sess., particularly to p. 31, par. 93. Work to provide for an increased spillway capacity at dam No. 1 at an estimated cost of $115,000 has been approved; see S. 35, 79th Cong. 1st sess. This lock is located at mile 56.6 Tombigbee River, nearest town, St. Stephens, Ala.).

HOWARD J. SCHULTE, *Engineer (Civil)*.

FEBRUARY 19, 1945.

Subject: General Comments Relative to the Traffic Movement on the Intracoastal Waterway Between Mobile and New Orleans.

To: Mr. E. E. Bottoms.

1. The undersigned departed at 6 a. m. via rail from Mobile, Ala., this date en route to New Orleans, La.; arrived at New Orleans, La., at 12:30 p. m. (train being 1¾ hours late) for the purpose of contacting various individuals possessing first-hand knowledge of general conditions across the Intracoastal Waterway between New Orleans, La., and Mobile, Ala. Also, to obtain from these individuals facts and opinions relative to navigating the waterway with present-type inland-waterway equipment; feasibility of establishing harbors of refuge along the route; costs per ton for line-haul operation across the waterway (exclusive of terminal or handling charges); and any other general comments relative to the problems of the afore-mentioned route.

2. Immediately upon arrival at New Orleans, La., the undersigned contacted Mr. A. C. Klein, chief administrative division, office of the district engineer, Mobile, Ala. Mr. Klein arranged for a car and driver for the undersigned. After explaining my purpose, etc., to Mr. Klein, he called in Mr. Lewis H. Donner, section head, commercial statistic section, New Orleans district office. Mr. Donner showed the undersigned various photographs of equipment, etc., used on both the river and the sound and gave the undersigned six prints of these, which are enclosed herewith. Mr. Donner stated that the Charles C. Smith & Co., of Houston, Tex., are towing across the subject sound and using the same equipment on the Mississippi River. This afore-mentioned equipment is being used upstream on the Mississippi River as far as Pittsburgh. Messrs. Klein and Donner suggested that I confer with Capt. L. A. Jeanfreau, of the district office, as he has had many years of experience navigating the sound. A résumé of Captain Jeanfreau's comments follows:

(*a*) Capt. L. A. Jeanfreau: The captain is of the opinion that modern tunnel-type inland-waterway towboats can safely navigate the sound about 90 percent of the time. He states that the river towboat *Monrola* (see enclosed photograph) has very little freeboard and would be awash a good bit of the time but with steel housing, etc., this would not prevent her from navigating the sound successfully. He stated that a boat of this kind would take the seas as well as the regular tugs (structurally sound) and would not be top-heavy. This boat, according to the captain, has between 550 and 600 horsepower and should be able to handle three normal-size barges (loaded) across the sound at an average speed of 3 to 4 miles per hour. The captain stated that the above-mentioned towboat (*Monrola*) is about average for modern-day river towboats. However, a good many of the river towboats, in his opinion would be considerably better for crossing the sound than the *Monrola*. Relative to the feasibility of establishing harbors of refuge across the sound, the captain stated that water is sufficently deep around Ship Island to permit the average tow to get within one-quarter of a mile of the island which affords a pretty good lee; the average tow can get in very close to Horn Island. There is an old channel adjacent to this island that runs the entire length of same; Petit Bois and Dauphin Islands furnish a good lee and tows drawing 6 or 7 feet can get within about one-quarter of a mile from these. The captain is of the opinion that jetties along these islands would be helpful if the tows could pull in between two jetties and that such harbors would appreciably reduce delays in starting across the sound and also increase the safety in operation. He is, however, doubtful if the improvement would justify the expenditure. The most hazardous pass between Mobile and New Orleans, in the captain's opinion, is the Horn Island pass which is about three-fourths of a mile wide. The captain stated that the Weather Bureau had been requested to establish a storm warning (flag and light) on the Rigolets and in his opinion this would be very helpful. The undersigned called the captain's attention to the fact that some people were of the opinion that river towboats were not structurally sound for riding the seas encountered in the sound. Particularly, this weakness seemed to be from the sternward bulkhead to the stern of the boat which was due to the tunnel and ensuing decreased buoyancy, etc. The captain stated that he was familiar with this theory but that buckling of bottom plates near the sternward bulkhead has occurred on lake waters and therefore was not due to rough water but primarily due to vibrations of motor, shaft, etc. He stated that tunnel-type river towboats would not pitch a great deal on the sound but rather would be awash quite a lot of the time which could be withstood by raising the door sills, etc. The captain is of the opinion that there are many days that river towboats could push barges over the sound in lieu of using a hawser line. He also stated that the tug-type boats now used on the sound would not work so well in rivers, but they can and do operate to some extent up the rivers but cannot handle as many barges as he regular river towboat.

HOWARD J. SCHULTE, *Engineer (Civil)*.

FEBRUARY 20, 1945.

Subject: General Comments Relative to the Traffic Movement on the Intracoastal Waterway Between Mobile and New Orleans.

To: Mr. E. E. Bottoms.

1. Reference is made to telephonic conversation this date between yourself and the undersigned. The DeBardeleben Coal Corp., Coyle Lines, will not be contacted. Every effort will be made to avoid indiscriminate interviews relative

to the above-mentioned subject. However, in some cases it is very hard to determine the other person's viewpoint until you have talked with him for a short time and then every attempt has been made to make a diplomatic exit without disclosing anything of a controversial nature. In this connection, every one that the undersigned has conferred with to date has been very cooperative and in most instances has expressed a high regard for the Corps of Engineers and at least one (Mr. Guthans, whose comments were previously reported but this particular comment was considered irrevelent to the subject, therefore, was not recorded in the résumé of the interview) stated that there was a move on to throw the river and harbor works of the Engineers into a political set-up and he would guarantee a strenuous fight against that move by himself and all of his acquaintances who were interested in waterway developments. Mr. Guthans had particular reference to the move toward MVA, etc. There is no doubt in the undersigned's mind that while his contacts and inquiries have been confined strictly to the problems of the Mississippi Sound, some of the parties so contacted will associate these inquiries with the Tombigbee project after they have had time to think the interview over. This is particularly true due to the fact that it is logical to believe that the problems of the sound are recognized as a vital criterion to the Tombigbee project by all operators in this locale. Also, in view of the fact that recently about 1,200 inquiries have been sent out relative to the Tombigbee project. The undersigned interviewed several people this date relative to the above subject and a résumé of their comments, etc., is given in subsequent paragraphs.

2. Mr. H. B. Collins, superintendent of the Federal Barge Line docks at New Orleans, La.: The undersigned contacted Mr. Collins primarily for the purpose of obtaining his recommendation as to whom of the Federal Barge Line personnel to contact relative to the above subject. Mr. Collins suggested that I interview Mr. D. P. Donzales, pilot on the tugboat *Mobile* for information relative to the conditions across the sound and Mr. Marshall of the main office of the Federal Barge Line located in the International Building, New Orleans, La., relative to an estimate of line-haul costs. Mr. Collins stated that he would also recommend interviewing Mr. S. J. Delacruz, master of the aforementioned *Mobile* but he was presently out of town. Mr. Collins stated that the tug *Mobile* was designed and constructed for navigating the sound. She draws 8½ feet and is a twin screw, 1,200 horsepower. The *Cordova* (Federal Barge Line towboat used on the river) is sometimes used across the sound when the *Mobile* is laid up for repair. However, the *Cordova* must await very favorable conditions on the sound to afford a safe crossing. Mr. Collins has not ridden across the sound with a tow and, therefore, his knowledge is gathered from conversation only.

3. Mr. Marshall of the main office of the Federal Barge Line, New Orleans, La.: After the undersigned requested costs relative to line haul across the sound, Mr. Marshall referred him to Mr. Powell. Mr. Powell was in conference and the undersigned was then referred to Mr. Macheau. Mr. Macheau assured the undersigned that if such costs were available it would be in his department, but that he did not have the data in this form at the present time. I informed him that the Board did not desire to burden his office with too much study in this regard and asked him for an estimate of the costs based on his experiences. He stated that he would rather have some time to work up something on this and asked if he might mail same to me. I informed him that we were temporarily stationed at the Mobile district office and to mail such data as he desired to furnish to this office marked to the attention of Mr. E. E. Bottoms.

4. Mr. D. P. Donzales, pilot on the Federal towboat *Mobile*, which operates across the Mississippi Sound. Mr. Donzales had been with the Federal Barge Line since 1921 and has held pilots' licenses since 1927. Substantially all of Mr. Donzales' experiences have been confined to operations across the sound. The *Mobile* is not frequently used on the river. However, the *Mobile* has been used as far as 200 miles up the Warrior River. When used on the Warrior, the *Mobile* tows up-river style (pusher type) but the boat is designed for towing on a hawser. This gentleman is of the opinion that the modern tunnel-type river towboat can be safely used across the sound but does not think the stern-wheel type nor the old type with wooden housing, etc., could be used. Mr. Donzales states that the Lone Star Cement Co. owns a river-type towboat which they use on the Tombigbee River but frequently use same for towing across the sound. This boat has twin 360-horsepower Diesel engines. The Lone Star Cement Co. also owns a 500-horsepower regular tug-type boat which they use exclusively on the sound. It is this gentleman's opinion that tugs such as presently used on

the sound can successfully tow four or five average-size barges up the Mississippi River. Mr. Donzales stated that modern river towboats were structurally sound for navigating the intracoastal waterway, but would have to be altered in minor ways such as adding a windlass, etc., on the bow for anchoring purposes; stern towing bits; and, in some cases, raise the door sills. Relative to utilizing the various islands for harbors of refuge the gentleman called attention to the fact that running into islands too closely is quite hazardous for the reason that winds change very fast and if caught too close to the island after the wind had changed "island-shoreward" the barges would be grounded. The gentleman believes that in most cases it is less hazardous to anchor the barges offshore and states that frequently they anchor the barges on the hawser line, pull out one barge and run into port. This is done to avoid towing all the barges off course when only one is designated for the port. Also, to avoid the difficulty of handling the entire tow in the port basin. The gentleman is of the opinion that in some places where the swells run in from a southeast wind, jetties would be of assistance as harbors of refuge. This is particularly true around Petit Bois and Dauphin Islands. Petit Bois Pass is the most hazardous of all the passes. Sufficient protection is available to get Petit Bois Pass (going eastward), but sometimes crossing this pass requires 10 to 12 hours' delay. This gentleman is of the opinion that a storm signal on the Rigolets or just after leaving the lock at New Orleans would be of assistance to tugs that do not have radios. At present there is a storm signal at the foot of Esplanade Avenue, New Orleans, La., but that all boats do not have an opportunity to see this; that is, the boats coming through the lock pass this signal, but a good many tows are made up at the lower end of the lock and consequently do not pass the signal. Relative to a storm signal on the Rigolets, this gentleman points out that should the signal indicate a storm the boats going east would have to return west about 10 miles for refuge. If the storm signals were placed in the industrial canal, they could tie up then without the necessity of making the "back run." The gentleman called attention to the fact that larger-type barges were used on the Mississippi River than on the Warrior River due to the small locks on the latter river; consequently, Mississippi River-type barges would be difficult to handle through the locks on the Warrior River. The afore-mentioned boats owned by the Lone Star Cement Co. are named *Lone Star* and *Incor*. The *Lone Star* is the tug type used almost exclusively on the sound while the *Incor* is the company's river towboat which is used frequently across the sound. Mr. Donzales states that the design for the *Incor* was copied from the design of a regular river-type tunnel towboat with the exception of the addition of stern towing bits and a windlass and anchor on the bow. The gentleman states that the lock at New Orleans is sometimes very congested, necessitating from 6 to 7 hours' delay. The congested periods are usually after the break-up of bad weather when many tows have been waiting to proceed.

5. Mr. H. A. Sawyer, vice president and manager for the Lone Star Cement Co., New Orleans, La. This gentleman stated that his pilots who would have first-hand information relative to my inquiries were out of town for a week or so. However, from his experiences he is of the opinion that the use of modern tunnel-type river towboats across the sound would necessitate too many delays in awaiting favorable weather conditions. His company brings river equipment across the sound when operation requires same but are reluctant to do so. He stated that the *Incor* was their river towboat and that they used this across the sound only when absolutely necessary. He states that the *Incor* could not take the rough passes around Dauphin and Petit Bois Islands with any amount of regularity for the reasons that these passes are frequently too rough. This gentleman believes that establishing harbors of refuge at intervals along the intracoastal route would be beneficial but if jetties were constructed they would have to be of superstrength for his company to take a chance having their boats lay behind same during a very rough sea. Mr. Sawyer states that the tug owned by his company and used across the sound is not used on the river. Their equipment is not equipped with radio. The gentleman states that the company has very little damage to equipment due to the battering effect of barges in a rough sea, etc. Mr. Sawyer called attention to the fact that the barges owned by his company are equipped with rudders which are so constructed that they can be lifted with a windlass when use of same is not required. However, when going through a lock or bridge opening, etc., the rudders are let down and manned by deckhands to assist in the steering and preventing damages. (This seems to be unique equipment but according to Mr. Sawyer, the safety factor will justify the cost of installing the rudders.) Incidentally, Mr. Sawyer worked for the

Illinois State Highway about the year 1917 or 1918 and was stationed at Cairo, Ill., for some time. Consequently, he seemingly has a great interest in the Mississippi River waterway.

6. Mr. Augustus B. Harris, owner of the Augustus B. Harris & Sons Towing Co., New Orleans, La. Mr. Harris states that he usually tows four wooden barges with his tugs. He owns two deep-water tugs and two smaller boats. The larger two of his boats have 250- and 320-horsepower engines, respectively, and the smaller two have 165- and 120-horsepower engines. (NOTE.—Mr. Harris contemplates replacing the 120-horsepower engine with a 170-horsepower engine within the next 30 days.) Mr. Harris states that either one of his four boats take tows across the sound without difficulty. However, he does not permit his two small tugs to go out unless the weather is very favorable. Mr. Harris does not think the tunnel-type flat-bottom river towboat would be safe operating in the sound for the reason that they do not have enough freeboard. This according to Mr. Harris, is especially true of the bow of these boats. Also, Mr. Harris is of the opinion that the flat-bottom tunnel types of towboat create considerable vacuum in the tunnel and when on rough water, the strain would be too great for the average type hull. Mr. Harris stated, however, that the semitug type that is now being used on the river could navigate the sound but the delays, necessitated by weather conditions, would be somewhat increased due to the use of the smaller type of tugs. Mr. Harris pointed out that delays were not always due to the limitations of the towing vessel but was a combination of the type of towing vessel and the type of barges towed. He called attention to the fact that if the barges were quite large and loaded heavily there was considerably more chance of snapping the hawser or breaking the couplings and the tug could not get near the barge to make repairs during a heavy sea, etc. Mr. Harris does not think that harbors of refuge would be very successful as the sand bottom shifts too much to afford the maintenance of a channel into same. Furthermore, the gentleman does not believe jetties could withstand the pressure, etc. The gentleman states that they now take advantage of the lee of the islands and he does not think this could be improved to any great extent. He called attention to the fact that there was one very bad shoal at Bay St. Louis known as the Square Handkerchief Shoal. Mr. Harris states that when tows run into bad weather just out of Mobile, they run into the Pascagoula River. Mr. Harris states that the stern wheel type of river boat would be unable to tow successfully across the sound for the reason that the wheel would be in the way of the hawser line and also, through the rough passes, the wheel would be out of the water quite a bit of the time. Relative to the average line-haul costs (exclusive of terminal or handling costs), Mr. Harris states that he estimates that his tugs will make five trips per month across the sound. The towing rate is $0.80 per ton including the return of the empty barge, of which about $0.50 is actual cost. This figure does not include furnishing the barge, hawser line, couplings, etc. If the towing includes furnishing of the barge, hawser, coupling, etc., the rate is $1.06 per ton, including the return of the empty, of which about $0.76 is actual cost. If the operator had a regular two-way load—that is, loaded east-bound and west-bound—the costs would decrease about 25 percent.

7. In writing the above résumé of the various interviews, the undersigned has attempted to convey the opinions and comments of the persons interviewed according to their individual terminology without necessarily adhering to the principles of rhetoric.

HOWARD J. SCHULTE, *Engineer (Civil)*.

FEBRUARY 21, 1945.

Subject: General comments relative to the traffic movement on the Intracoastal Waterway between Mobile and New Orleans.
To: Mr. E. E. Bottoms.

The undersigned interviewed several gentlemen this date relative to the feasibility of using river-type towboats across the Mississippi Sound; construction of harbors of refuge at intervals across the sound; linehaul costs per ton; and general comments, and so forth, relative to the intracoastal waterway. A résumé of the comments of the gentlemen interviewed this date is as follows:

(*a*) Mr. D. B. Williams, owner of the Williams Transportation Co., New Orleans, La. Mr. Williams states that he does not operate river towboats and consequently doesn't possess knowledge as to how they would operate across

the sound. Mr. Williams stated that he failed to understand why anyone would be interested in using river towboats on the sound at the present time. He stated that he could have understood such an inquiry a couple of years ago but there was a surplus of equipment on the sound now. The undersigned then informed Mr. Williams that we also wanted to know if his equipment could be used on the rivers. Mr. Williams stated that his tugs drew about 8½ to 9.0 feet and they might use them as far up the Mississippi as Memphis Tenn. His tugs handle two-, three-, and four-barge tows. Mr. Williams states that lights and markers across the sound could be improved and he is of the opinion that the Coast Guard does not always replace destroyed markers as readily as they should. He suggested that a storm signal on the Rigolets would be helpful but on the other hand he states that the crews are always looking for an excuse to stop and stand by anyway so it may increase unnecessary delays. The gentleman states that the over-all system of navigating the sound is good but the available personnel is not qualified and do not care about their jobs, consequently their difficulty and increased operating costs are primarily personnel problems. I asked Mr. Williams, in view of the fact that he towed a considerable amount of petroleum, if he thought the pipelines would furnish stiff competition to the towing business. He stated that economy in transporting petroleum was, tankers first, pipelines next, barges next, and last the railroads. Mr. Williams was quite perturbed about the conditions of the bridges in the vicinity of Pensacola Bay. He stated that these bridges were causing operators unnecessary delays and expense and that the county (Escanbia County, Fla.) was making a political racket out of damages on these bridges. (The county has a claim against Mr. Williams now for about $30,000 due to alleged damages caused by his equipment to the Gulf Beach Bridge (Florida Highway No. 93) located at mile 172.4 east of New Orleans.) Mr. Williams states that several contractors, who possess influence with county politicians, put up temporary weak repairs to the bridges with the thought that some tow would tear same down and then they could put in another claim, and so forth. He states that there are no fenders on the above-mentioned Gulf Beach Bridge (this bridge is bascule highway type) and that they have been unable to close this bridge for highway traffic for some time. The existing temporary repairs are of such a nature if a sizable tow hit these, the bridge may fall in the bay. (Mr. Williams was very congenial but under the circumstances, I closed the interview and spent some time talking sociably with the gentleman.)

(*b*) Mr. J. C. Berry, port captain for the Canal Barge Co., New Orleans, La. This gentleman worked with the Federal Barge Lines from 1930 to 1941. He has ridden tows up the Mississippi and also on the Missouri River in the vicinity of the Kansas Citys. Mr. Berry is of the opinion that flat-bottom, tunnel-type, river towboats could not operate safely across the sound as they do not have enough freeboard, the housing is too high, and the doors, etc., are not watertight. He states that he believes this to be the opinion of all their pilots. He states that river towboats do no ride rough water as well as the regular tug type. This company is at present operating two DPC5 tugs across the sound on a charter basis. Mr. Berry states that the company has four regular tug-type boats and one river towboat (flat bottom, tunnel type).

(Note:—I called at this office to interview Mr. Jorden of this company, but since he was out I talked with Mr. Berry. Mr. Jordan came in while I was there and his comments are recorded in the following subparagraph:)

(*c*) Mr. Harry B. Jorden, vice president of Canal Barge Co. and president of the Canal Co., Inc. This gentleman is of the opinion that the flat-bottom tunnel-type of river towboat does not have enough freeboard to operate safely across the sound. He states that they will not use their river towboat across the sound. The gentleman believes that the bow of most river-type towboats would have to be changed as they need about 8 feet of freeboard on the bow for operating on the sound. He believes that most river towboats are too top-heavy to take the sea across the sound and due to low freeboard, they would be awash most of the time. Mr. Jorden voluntarily brought up the Tombigbee project and said this project would be a great help to the country in obtaining cheap transportation. However, he stated that the project would throw a lot of the present river equipment into the category of being obsolete. (The undersigned professed only newspaper knowledge of the Tombigbee project and explained that he was not familiar with this project for the reason that his permanent station was the Kansas City District, etc.) Mr. Jorden showed the undersigned the plans for a river-type towboat which they are to initiate construction on in the near future. He stated that he was very glad I came

in (he thought of something he had overlooked while talking with the undersigned), as he intended to use this boat for 30 years and consequently he wanted to talk with the builders and raise the bow, etc., as he believed that some day it would be highly important for a river towboat to be so designed as to operate on the Intracoastal Waterway as well as the river. He stated that the ideal waterway would be an inland "canalway" which would be protected from the sea all the way across from New Orleans to Mobile and is of the opinion that a lot of the existing waterway links could be utilized in such a project. The gentleman said he was highly in favor of the Tombigbee project but had always felt that the problem of the sound would defeat the project. Mr. Jorden suggested that I contact the Federal Barge Line people as, in his opinion, they would know more about whether river towboats could be used across the sound than anyone else. I informed him that I had interviewed one of their pilots who had been operating on the sound since 1921. He, Mr. Jorden, said he did not like to be inquisitive but he'd sure like to know this man's opinion. I then informed him that this man was of the opinion that by adding a stern towing bit, windlass and anchor on the bow and raising door sills etc., that flat-bottom tunnel-type river towboats would have no difficulty in towing on a hawser across the sound. Mr. Jorden stated that he would rather have the opinion of a man like this than anyone else and as far as he was concerned, he would go along 100 percent with the man's conclusion. He literally stated that you could prove a lot of theories on paper but the actual operation would prove them wrong. Mr. Jorden is of the opinion that harbors of refuge established every 40 or 50 miles or so across the sound would be a great aid to safety and would avoid considerable delays in navigating the sound (waiting for favorable weather, etc.). He stated that they had requested the Weather Bureau to establish a storm signal on the Rigolets but in addition to increasing the safety in operations, this might also increase unnecessary delays as the crews were always looking for an excuse to "lay-by."

HOWARD J. SCHULTE, *Engineer (Civil)*.

FEBRUARY 23, 1945.

Subject: General comments relative to the traffic movement on the Intracoastal Waterway between Mobile and New Orleans.

To: Mr. E. E. Bottoms.

1. The undersigned departed at 6 a. m. this date via Government automobile (with driver) en route to Pensacola, Fla., for the purpose of interviewing several gentlemen engaged in the operation of towboats across the subject waterway for the purpose of obtaining their viewpoints relative to using river-type towboats across the water, etc. The following is a résumé of the opinions and facts given by the gentlemen interviewed.

(*a*) Capt. Neal Hall, pilot for the Aiken Towing Corp., Pensacola, Fla. This gentleman has had pilots' licenses for 1 year but has made many trips across the sound and also up the Mississippi River, etc. He is now master on a DPC boat, operated under a charter, from the Government, and tows five Government barges across the sound. The captain is of the opinion that the flat-bottom, tunnel-type river towboat will work very well across the sound and in a good many respects will work better than the tugs now used. He states that the river-type towboat will navigate the sound better than the tugs navigate the river. The captain operates over the full length of the Intracoastal Waterway and frequently goes up the Mississippi River for a distance of 190 miles. He states that he sometimes pilots the company tugs *Nellie*, which has 450 horsepower, and the *Florida* which has 350 horsepower. He is of the opinion that harbors of refuge are unnecessary along the sound as there is ample protection at the present time. The captain pointed out that the flat-bottom tunnel-type river towboats would have even better protection than the tugs as they could get in closer to the lee of the islands and into other ports. He stated that while the river towboat would have her decks awash in rough weather, if the door sills were higher, etc., there would be no reason for this to interfere with her operation. This gentleman stated that the channel for the most part was well marked but it was his opinion that the Coast Guard was very slow in replacing destroyed markers. The captain stated that at present it usually takes about 28 hours to run the 140 miles of the Intracoastal Waterway with five barges in the tow. He stated that considerable delays were encountered at the Harvey and Industrial Locks at New Orleans, La. Sometimes these delays were as much as 12 hours. The captain stated that it required 1 hour to lock through

this lock and you could count the tows ahead of you to arrive at the number of hours delay. The bridges cause considerable delay due to the fact that often you must awaken the tender, break up tows, etc. The bridges the captain referred to were the Gulf Beach Bridge (Florida Highway No. 93 bridge, Bascule highway type, at mile 172.4 east of New Orleans) under the jurisdiction of Escambia County, Fla.; Sound Bay Bridge (Santa Rosa Sound bridge, swinging highway type, at mile 189.5 east of New Orleans) under the jurisdiction of Escambia County, Fla.; and the Hathaway Bridge (St. Andrew Bay bridge, swinging highway type, at mile 285.0 east of New Orleans) under the jurisdiction of Bay County, Fla. The captain stated that the county would not adequately repair these bridges nor condemn them but were just sitting back waiting for some tow to destroy them so they could claim damages. This, according to this gentleman, was particularly true of the Gulf Beach Bridge which is about ready to fall on any tow that bumped into the inadequately repaired piers. This temporary false work, etc., does not have protecting fenders, etc.

(*b*) Capt. L. W. Levis, pilot for the Aiken Towing Corp., Pensacola, Fla. This gentleman has been with this company for a number of years and has had a considerable amount of varied experiences in the operation of towboats on the sound and rivers. The gentleman states that he is of the opinion that the flat-bottom tunnel-type river towboat can be used across the sound without any difficulty. The only problem would be the housing, as due to low freeboard she would be awash in rough weather. However, the doors could be made watertight by using two half doors and keeping the bottom half closed; also, it would be necessary to install towing bits on the stern of the boat and a windlass and anchor on the bow. Other than these minor alterations or additions, the gentleman believes the present river-type towboat to be structurally sound for navigating the Intracoastal Waterway. The captain states that he has seen the flat-bottom tunnel-type towboats take some very rough seas without damage to them. The gentleman doesn't think harbors of refuge are necessary; states that there are many places at short intervals where a tow can get out of a rough sea. The captain states that tugs of the type now used on the sound can navigate the rivers very well, but he is of the opinion that river-type towboats would navigate the sound even better than the tugs navigate the river. The gentleman states that the company-owned tug *Florida* has been up the river to Vicksburg several times and went up to Memphis in 1939. The captain states that he piloted a similar tug with five barges up the Mississippi and Missouri Rivers drawing 8½ feet. The gentleman states that he ran the company-owned tug *Florida* from Port Arthur to Vicksburg with two 10,000-barrel barges for 8 months and didn't have any trouble. He states that the shoals throughout the sound are well marked. However, the Coast Guard sometimes takes as long as 3 months to replace a destroyed marker. They have some trouble with tows dragging markers out of line so as to be misleading but usually the experience of the pilot informs him of the situation. The captain states that they have most of their trouble with the three bridges (Gulf Beach Bridge, Sound Bay Bridge, Hathaway Bridge. These are the common names of these bridges but full information is given parenthetically in subparagraph (*a*) above). Captain Levis states that in his opinion the regulations relative to passing through these bridges are not logical, e. g., regulations limit the tow to three barges if a tug is used on the tail barge to assist in guiding through the bridge work. He thinks this should be in over-all length in lieu of designating the number of barges; tailing tug just hooks on to meet regulations as if he were to attempt to push or flank he would get the tow out of line resulting in damage to equipment and the structure; if tailing tug is not available, regulations limit the towing to one barge at a time which must be towed alongside the towing vessel. Therefore, only about 3 feet of clearance is had on either side. This, according to this gentleman, is more difficult than taking about three barges in line through without a tailing tug; and, regulations require that the three barges (end to end) be pulled up tight on ratchets when a tailing tug is used. This is impossible as the barges then actually become one long barge which cannot be handled in a tide run, therefore this regulation is never complied with. The operators merely pull them up close on the coupling.

(*c*) Mr. Charles H. Johnson, superintendent of operations for the Aiken Towing Corp., Pensacola, Fla. This gentleman states that the average speed across the sound is about 3½ miles per hour and it is his opinion that river equipment (flat-bottom tunnel-type towboats) can navigate the sound without difficulty. This gentleman did not comment very much relative to the issue; however,

he stated that he wanted to go on record as complaining about the delays and dangers caused by the three bridges fully described in subparagraph (*a*) above. He states that about six tows per day go through these bridges and it costs, in delays and damages, about $600 per day for each boat over and above normal delay, etc., at a bridge. Towboats lose on an average of about 4 hours at each of the three bridges. He stated that when the counties repaired the bridges, they construct very inadequate false work, etc., so as to catch another boat with a damage claim. The gentleman states that the above-mentioned Gulf Beach bridge cannot be closed and therefore is not fit for road traffic. The span is being held up by temporary cables and the false-work holding the bridge up is not protected by fenders, etc. It is his opinion that if a loaded barge hits this false work, the whole span of bridge will fall on the tow. He stated that the county was going to condemn the bridge but decided against it due to the cost involved in razing same. He stated as an afterthought that the only problem he had thought of with using a river towboat is whether or not they would pull on a hawser. That is, if the housing would be too high, catch the wind and keep the towing vessel pulling "off-line." He pointed out that there were numerous times when river towboats could use a pusher-type hookup in lieu of the hawser line. This pusher hookup will increase the speed by about one mile per hour. Some of the tugs use a pusher-type hookup when possible. (NOTE.—The reason so many of the Aiken employees were interviewed was due to the fact that these gentlemen walked in and made a conference out of the undersigned's call. I attempted to obtain estimates of cost but seemingly same was not available.)

(*d*) Mr. J. W. Smith, of the Charles Smith & Co., Pensacola, Fla. Mr. Smith states that they have one tug *Walker*, that operates up the river and also across the sound. He states that usually the tugs used on the sound do not have sufficient power for navigating the river currents. He states that their biggest problem at the moment is the three bridges (named in subparagraph (*a*) above). The gentleman states that a local operator now has a tug standing by to tail the barges through the bridges. This operator charges $6 per barge for tailing through each bridge. Mr. Smith states that the counties are very slow about repairing bridges and removing such hazards to navigation. This gentleman states that they have trouble in the channel of the Pensacola Harbor to the Gulf. This channel sometimes runs heavy currents which delay tows at times as much as 48 hours. He stated that their pilots have very little trouble on the sound except at a point known as Williams Creek. At this point the water becomes very rough at times and the channel changes quite frequently causing tows to run aground.

(*e*) Mr. A. M. Hyer, president of the Hyer Towing Co., Inc., of Pensacola, Fla. This gentleman states that he has spent his entire life on boats or in the towing business and that his experience has been principally on the problems of the sound. Also, he has designed and supervised the construction of his own tugs. He states that his outfit is presently known as a low-cost operator. (There seems to be, known among the operators engaged in navigating the sound, certain companies known as low-cost operators and others as high-cost operators.) Mr. Hyer states that he is a salt water man and does not care about fresh water operating as the problems of going aground, currents, etc., on fresh waters are more than he cares to contend with. This gentleman states that he is familiar with the flat-bottom, tunnel-type of river towboats and he knows of no reason that would prevent their use across the sound. He states that he has been running a short ways up the Mississippi River with his tugs for 6 years but is of the opinion that beyond Vicksburg, the type of tugs and tows now operating across the sound would have trouble. Mr. Hyer states that there are a lot of theories against using river type towboats across the sound and that these theories look good on paper but actual practice will prove them false. The gentleman states that there is, however, one angle that will decrease the economy of using river type towboat. He has reference to the fact that most river towboats handle seven to nine barges and consequently must be very powerful to navigate the currents, etc. (about 1,200 to 2,000 horsepower.) This horsepower could not be fully utilized on the sound for the reason that only four or five barges can be handled on a hawser at one time across the sound. He states that the average tow across the sound is not more than three barges and this could not be appreciably increased. The gentleman stated that in his opinion there was a good many days when a river-type towboat could tow on a "pusher-type" hook-up and that occasionally the tugs tow up in this manner. He states that "pusher-type"

hook-up will increase the speed of the tow about 1 mile per hour over and above the average hawser "hook-up." He stated however, that a long lead on the hawser would also increase the speed of the tow but in most instances was impracticable due to close channel conditions. Mr. Hyer referred to the bridge condition (three bridges described in subpar. (*a*) above). He stated that the county was negligent in repairing damaged bridges and literally said that the counties involved were not very cooperative with towboat men. Mr. Hyer did not elaborate very much on the bridge question or difficulty but stated that they had prepared a letter for the chairman of the Gulf Region Advisory Committee for presentation to the Chief of Engineers relative to this bridge problem. Mr. Hyer stated as an afterthought that there was a theory that the tunnel of river-type towboats decreased the buoyancy sternward and the cantilever action tended to buckle the bottom plates or to cause heating of the shaft bearings. Mr. Hyer stated that it was his opinion that this difficulty was due to vibration (critical speed) as the problem was prevalent in still water as well as rough water. I asked Mr. Hyer for an estimate of line haul cost (exclusive of terminal or handling charges) per ton for navigating the sound. Mr. Hyer stated that the OPA price for towing petroleum was 4¼ mills per ton with a minimum of 3,000 tons which included the return of the empty barge. He stated that since he was a low-cost operator that he didn't care to be quoted on his costs and had been asked by other operators to keep still about his costs, however, if the undersigned didn't quote him he could truthfully say, to arrive at the cost, just divide by two. He stated that this cost, if the barges were loaded east-bound and west-bound, could be reduced by 25 percent. I asked Mr. Hyer if the pipeline competition looked serious from his angle. He stated that it definitely did not as he had proven time and time again that barge transportation cost was considerably under pipeline cost. Also, a barge transportation can and does compete with tanker operations insofar as costs are concerned. Mr. Hyer seemed to be quite pleased with the past activity of the Engineering Department and stated that he was more than glad to give us all the information he could at any time. Relative to establishing harbors of refuge at intervals across the sound, Mr. Hyer stated that in his opinion it was absolutely unnecessary. He stated that there were many places of refuge at the present time behind the various islands but that he had to convince each of his operators that they could get into the lee of same. He stated that his tugs were all equipped with radios and very often a man got in rough water and he would have to more or less order him to go in behind one of these islands he thought he couldn't get behind. He stated that after a hard blow and he got the pilot convinced that he could get in behind the island, thereafter they were believers in the possibility. Mr. Hyer stated that he was going to Washington, D. C., the first of this week, February 26, 1945, for a meeting, relative to waterway operations, etc. Mr. Hyer stated that he would recommend that the undersigned talk with the following gentlemen as in his opinion they were good sound thinkers and possessed very good knowledge of towboats, etc.:

(1) Mr. Harry Koch of the Koch-Ellis Marine Contractors, New Orleans, La.
(2) Mr. Jake Hersey of the Butcher Allied Industries, Houston, Tex.
(3) Charles Edwards of the Edwards Transportation Co., Houston, Tex.
(4) Captain Hand of the Texas Co., Port Arthur, Tex.
(5) Mr. Will Picton, D. M. Picton Co., Port Arthur, Tex.
(6) Mr. Jim Guiton of the Bay Towing Co., Galveston, Tex.
(7) Mr. Trimble of Orange, Tex.
(8) Mr. Fred Zigler, Jenning, La.

2. In writing the above résumé of the various interviews, the undersigned has attempted to convey the opinions and comments of the persons interviewed according to their individual terminology without necessarily adhering to the principles of rhetoric.

HOWARD J. SCHULTE, *Engineer (Civil)*.

ALL WATERWAYS TRIBUTARY TO THE GULF OF MEXICO (EXCEPT THE MISSISSIPPI RIVER, AND ITS TRIBUTARIES AND OUTLETS) FROM ST. MARKS, FLA., TO THE RIO GRANDE; USE, ADMINISTRATION, AND NAVIGATION

THE LAW

Section 7 of the River and Harbor Act of August 8, 1917, provides as follows: "SEC. 7. That it shall be the duty of the Secretary of the Army to prescribe such regulations for the use, administration, and navigation of the navigable waters of the United States as in his judgment the public necessity may require for the protection of life and property, or of operations of the United States in channel improvement, covering all matters not specifically delegated by law to some other executive department. Such regulations shall be posted, in conspicuous and appropriate places, for the information of the public; and every person and every corporation which shall violate such regulations shall be deemed guilty of a misdemeanor and, on conviction thereof in any district court of the United States within whose territorial jurisdiction such offense may have been committed, shall be punished by a fine not exceeding $500, or by imprisonment (in the case of a natural person) not exceeding 6 months, in the discretion of the court."

NAVIGATION REGULATIONS—SECTION 207.180 33 CFR

(a) Description

These regulations shall apply to:

(1) *Waterways.*—All navigable waters of the United States which are tributary to or connected by other waterways with the Gulf of Mexico between St. Marks River, Fla., and the Rio Grande, Tex., both inclusive, except the Mississippi River, its tributaries and outlets; and including the Intracoastal Waterway from Apalachee Bay, Fla., to Brownsville, Tex.

(2) *Locks and floodgates.*—All locks, floodgates, and appurtenant structures in the above-described waterways.

(3) *Bridges, wharves, and other structures.*—All bridges, wharves, and other structures in or over the above-described waterways.

(4) *Vessels and rafts.*—The term "vessels" as used in these regulations includes all floating craft other than rafts.

(b) Authority of district engineers

The use, administration, and navigation of the waterways and structures to which these regulations apply shall be under the direction of the officers of the Corps of Engineers, United States Army, detailed in charge of the respective districts, and their authorized assistants. The cities in which these district engineers are located, and the limits of their jurisdiction, are as follows:

(1) United States district engineer, Mobile, Ala. From St. Marks River, Fla., to Pearl River, Miss. and La., both inclusive, and the Intracoastal Waterway from Apalachee Bay, Fla., to Lighted Buoy No. 41, Lake Borgne, La., mile 36.4, east of Harvey lock.

(2) United States district engineer, New Orleans, La. From Pearl River, Miss. and La., to Sabine River, La. and Tex., both inclusive, and the Intracoastal Waterway from Lighted Buoy No. 41, Lake Borgne, La., mile 36.4, east of Harvey lock, to Sabine River, mile 266, west of Harvey lock.

(3) United States district engineer, Galveston, Tex. From Sabine River, La. and Tex., to the Rio Grande, both inclusive, and the Intracoastal Waterway from Sabine River, mile 266, west of Harvey lock, to Brownsville, Tex.

(c) Commercial statistics

(1) As required by section 11 of the River and Harbor Act of September 22, 1922 (42 Stat. 1043; 33 U.S.C. 555), owners, agents, masters, or clerks of vessels plying upon the waterways to which these regulations apply shall submit a report on such activities for statistical purposes which shall contain the following information:

(i) Name of vessel.

(ii) Name and address of owner or operator.

(iii) Type of vessel—steam, motor, sail, barge, or other type.

(iv) Net registered tonnage—if not registered, cargo carrying capacity expressed in short tons.

(v) Maximum draft at time of passage.

(vi) Number of passengers.

(vii) Cargo—by commodities, expressed in short tons or other units by which such commodities are customarily measured, giving origin and destination.

(2) All persons rafting and towing logs shall submit a report giving such statistical information on their activities as may be required by the district engineer.

(3) Reports may be submitted on forms furnished free of charge by the district engineer. They shall be presented to the lockmaster at any of the federally operated locks, the gate tender at any of the federally operated floodgates, or the bridge tender at any of the bridges operated by the Department of the Army, for each trip made. Where no federally operated locks, floodgates, or bridges are passed, they shall be mailed promptly to the district engineer. On written request, persons or corporations making frequent use of these waterways may be granted permission to submit monthly statements in lieu of reports by trips.

(*d*) *Locks and floodgates*

(1) *Authority.*—The locking of all vessels and rafts and their movements while in a lock, or in the approaches thereto, shall be under the direction of the lockmaster. The term "lockmaster" as used in these regulations shall mean the lock official present who is in charge of the operation of the lock. Passage through floodgates shall be under the direction of the gatetender.

(2) *Sound signals.*—Vessels desiring passage through a lock or floodgate in either direction shall give notice to the lockmaster or gatetender by three long and distinct blasts of a horn or whistle or calls through a megaphone when within a reasonable distance from the lock or floodgate. When the lock or floodgate is ready for entrance, the lockmaster or gatetender shall reply with three long blasts of a horn or whistle or calls through a megaphone. When the lock or floodgate is not ready for entrance, the lockmaster or gatetender shall reply by four or more short, distinct blasts of a horn or whistle or calls through a megaphone (danger signal). Permission to leave the lock or floodgate shall be indicated by the lockmaster or gatetender by one long blast.

(3) *Visual signals.*—Signal lights will be displayed from sunset to sunrise as follows:

(i) One green light to indicate that the lock or floodgate is open to approaching navigation.

(ii) One red light to indicate that the lock or floodgate is not open to approaching navigation.

(iii) In addition, at certain locks where navigation over the dam is possible during high water, one purple light, visible both upstream and downstream, will also be displayed to indicate that navigation over the dam is possible. If no purple light is displayed, navigation over the dam is not possible.

(iv) During daylight hours large balls, similar in color and number to the light signals prescribed for use at night, will be displayed from a mast on the lock wall or other convenient location and at the site of the floodgates.

(4) *Precedence at locks and floodgates.*—Ordinarily, vessels or rafts arriving at locks or floodgates shall take precedence in order of their arrival, but in all cases vessels belonging to the United States or employed on public work shall have precedence over all others, passenger vessels shall have precedence over freight vessels, and individual vessels over tows or rafts. Small vessels will not be granted separate lockage when larger vessels are awaiting lockage, but will be required to lock through with other vessels. When two vessels approach the lock from opposite directions at approximately the same time, preference will ordinarily be given to the one for which the lock is prepared. When two vessels approach floodgates from opposite directions at approximately the same time, the vessel approaching the gates from the river side thereof will ordinarily have the right of way. In all cases, the order of actual entry shall be determined by the lockmaster or gatetender.

(5) *Entrance to and exit from locks and passage through floodgates.*—No vessel or raft shall enter or leave locks, or while floodgates are in operation, attempt to pass through floodgates before being signaled to do so. While waiting their turn, vessels or rafts must not obstruct navigation and must remain at a safe distance from locks or floodgates. Before entering a lock they shall take position in the rear of any vessels or rafts that precede them, and there arrange the tow for locking in sections if necessary. Masters and pilots of vessels or persons in charge of rafts shall cause no undue delay in entering or leaving locks or passing through floodgates upon receiving the proper signal, and shall take

such action as will insure that the approaches are not at any time unnecessarily obstructed by parts of a tow awaiting lockage or already passed through. They shall provide sufficient men to move through locks or floodgates promptly without damage to the structures. Vessels or tows that fail to enter locks or pass through floodgates with reasonable promptness after being signaled to do so will lose their turn.

(6) *Lockage and passage of vessels.*—(i) Vessels shall enter and leave locks and pass through floodgates under such control as to prevent any damage to the locks, gates, gate walls, or fenders. Vessels shall be provided with suitable lines and fenders, shall always use fenders to protect the walls and gates, and when locking at night shall be provided with suitable lights and use them as directed. Vessels shall not meet or pass each other anywhere between the gate walls or fender system at the approaches to locks or floodgates.

(ii) Vessels which do not have a draft of at least three inches less than the depth over sills or breast walls, or which have projections liable to damage gates, walls, or fenders, shall not enter the approaches to or pass through locks or floodgates.

(iii) No vessel having chains, lines, or drags either hanging over the sides or ends or dragging on the bottom for steering or other purposes will be permitted to pass locks or dams or through floodgates.

(iv) Power vessels shall accompany tows through locks when so directed by the lockmaster.

(v) No vessel whose cargo projects beyond its sides will be admitted to lockage.

(vi) Vessels in a sinking condition shall not enter locks, floodgates, or approaches.

(vii) The passing of coal from flats or barges to steamers while in locks is prohibited.

(viii) The lockmaster or gatetender may refuse to lock or pass vessels which, in his judgment, fail to comply with these regulations.

(7) *Lockage of rafts.*—Rafts shall be locked through in sections as directed by the lockmaster. No raft will be locked that is not constructed in accordance with the requirements stated in paragraph (f). The person in charge of a raft desiring lockage shall register with the lockmaster immediately upon arriving at the lock and receive instructions for locking.

(8) *Number of lockages.*—Tows or rafts locking in sections will generally be allowed only two consecutive lockages if individual vessels are waiting for lockage, but may be allowed more in special cases. If tows or rafts are waiting above and below a lock for lockage, sections will be locked both ways alternately whenever practicable. When two or more tows or rafts are awaiting lockage in the same direction, no part of one shall pass the lock until the whole of the one preceding it shall have passed.

(9) *Mooring.*—(i) Vessels and rafts when in a lock shall be moored where directed by the lockmaster by bow, stern, and spring lines to the snubbing posts or hooks provided for that purpose, and lines shall not be let go until the signal is given for the vessel or raft to leave. Tying to the lock ladders is prohibited.

(ii) The mooring of vessels or rafts near the approaches to locks except while waiting for lockage, or at other places in the pools where such mooring interferes with general navigation, is prohibited.

(10) *Operating locks.*—The lock gates, valves, and accessories will be moved only under the direction of the lockmaster; but, if required, all vessels and rafts using the locks shall furnish ample help on the lock walls for handling lines under the direction of the lockmaster.

(e) *Waterways*

(1) *Fairway.*—A clear channel shall at all times be left open to permit free and unobstructed navigation by all types of vessels and rafts that normally use the various waterways or sections thereof. The district engineer may specify the width of the fairway required in the various waterways under his charge.

(2) *Anchoring or mooring in waterway.*—No vessels or rafts shall anchor or moor in any of the land cuts or other narrow parts of the waterway, except in an emergency. Whenever it becomes necessary for a vessel or raft to stop in any such portions of the waterway, it shall be securely fastened to one bank and as close to the bank as possible. This shall be done only at such a place and under such conditions as will not obstruct or prevent the passage of other vessels or rafts. Stoppages shall be only for such periods as may be necessary.

(i) Except temporarily, as authorized above, no vessel or raft will be allowed to use any portion of the fairway as a mooring place without written permission from the district engineer.

(ii) When tied up individually, all vessels shall be moored by bow and stern lines. Rafts and tows shall be secured at sufficiently close intervals to insure their not being drawn away from the bank by winds, currents, or the suction of passing vessels. Tow lines shall be shortened so that the different parts of the tow will be as close together as possible. In narrow sections, no vessel or raft shall be tied abreast of another.

(iii) Lights shall be displayed in accordance with provisions of the Federal Pilot Rules.

(iv) Whenever any vessel or tow is moored to the bank, as authorized above, at least one crew member shall always remain on board to see that proper signals are displayed and that the vessel or tow is properly moored at all times.

(v) Vessels will not be permitted to load or unload in any of the land cuts, except at a regular established landing or wharf, without written permission secured in advance from the district engineer.

(vi) No vessel, regardless of size, shall anchor in a dredged channel or narrow portion of a waterway for the purpose of fishing if navigation is obstructed thereby.

(3) *Speed.*— Excessive speeding in narrow sections is prohibited. Offical signs indicating limiting speeds through critical sections shall be strictly obeyed.

(i) When approaching and passing through a bridge, all vessels and rafts regardless of size, shall control their speed so as to insure that no damage will be done to the bridge or its fenders.

(ii) A vessel shall reduce its speed sufficiently to prevent any damage when approaching another vessel in motion or tied up, a wharf or other structure, works under construction, plant engaged in river and harbor improvement, levees withstanding floodwaters, buildings submerged or partially submerged by high waters, or any other manner of structure or improvements likely to be damaged by collision, suction, or wave action.

(4) *Size, assembly, and handling of tows.*—Tows longer than 1,000 feet exclusive of the towing vessel and hawser or wider than 55 feet, or of a width greater than one-half the bottom width of the channel over which they are to move, will not be allowed in channels 150 feet wide or less except on waterways exempted by the district engineer or on other waterways by special permission of the district engineer.

(i) All vessels drawing tows not equipped with rudders in restricted channels and land cuts shall use two tow lines or a bridle on one tow line shortened to the greatest possible extent so as to have full control at all times. The various parts of a tow shall be securely assembled with the individual units connected by lines as short as practicable. In open waters the tow line and fastenings between barges may be lengthened so as to accommodate the wave surge. In the case of lengthy or cumbersome tows, or tows in restricted channels, the district engineer may require that tows be broken up, and may require the installation of a rudder or other approved steering device on the tow in order to avoid obstructing navigation or damaging the property of others. Pushing or towing of barges with towing vessel made up astern or alongside is permissible provided that adequate power is employed to keep the tow under full control at all times. Tows made up in this manner longer than 850 feet including the towing vessel or wider than 55 feet including the towing vessel, or of a width greater than one-half the bottom width of the channel over which they are to move, will not be allowed in channels 150 feet wide or less except by special permission of the district engineer.

(ii) No tow shall be drawn by a vessel that has insufficient power or crew to permit ready maneuverability and safe handling.

(iii) No vessel or tow shall navigate through a drawbridge until the movable span is fully opened.

(5) *Projections from vessels.*—No vessel carrying a deck load which overhangs or projects over the side, or whose rigging projects over the side, so as to endanger passing vessels, wharves, or other property, shall enter or pass through any of the narrow parts of the waterway.

(6) *Meeting and passing.*—Vessels on meeting or overtaking shall give the proper signals and pass in accordance with Federal Pilot Rules. Rafts shall give to vessels the side demanded by proper signal. All vessels approaching dredges or other plants engaged on improvements to a waterway shall give the signal for passing and slow down sufficiently to stop if so ordered or if no answering signal is received. On receiving the answering signal, they shall then pass at a speed sufficiently slow to insure safe navigation. Vessels approaching an intersection or bend where the view is obstructed must exercise due caution. At certain inter-

sections where strong currents may be encountered sailing directions may be issued from time to time through navigation bulletins or signs posted on each side of the intersections which must be observed.

(*f*) *Rafts*

Rafts will be permitted to navigate a waterway only if properly and securely assembled. The passage of "bag" or "sack" rafts, "dog" rafts, or loose logs over any portion of a waterway is prohibited. Each section of a raft shall be so secured within itself as to prevent the sinking of any log, and so fastened or tied with chains or wire rope that it cannot be separated or bag out so as to materially change its shape. All dogs, chains, and other means used in assembling rafts shall be in good condition and of ample size and strength to accomplish their purpose.

(1) No section of a raft will be permitted to be towed over any portion of a waterway unless the logs float sufficiently high in the water to make it evident that the section will not sink en route.

(2) Frequent inspections shall be made by the person in charge of each raft to insure that all fastenings remain secure, and when any one is found to have loosened it shall be repaired at once. Should any log or section be lost from a raft, the fact must be promptly reported to the district engineer, giving as definitely as possible the exact point at which the loss occurred. In all cases the owner of the lost log or section shall take steps immediately to remove it from the waterway.

(3) The regulations prescribed in subparagraph (e) (4) governing the length and width of tows shall apply also to rafts.

(4) All rafts shall carry sufficient men to enable them to be managed properly, and to keep them from being an obstruction to other craft using the waterway. To permit safe passage in a narrow channel rafts shall, if necessary, stop and tie up alongside the bank. Care must be exercised both in towing and mooring rafts to avoid the possibility of damage to aids to navigation maintained by or under authority of the United States.

(5) When rafts are left for any reason with no one in attendance, they shall be securely tied at each end and at as many intermediate points as may be necessary to keep the timbers from bagging into the stream and must be moored so as to conform to the shape of the bank. From sunset to sunrise rafts moored to the bank shall have lights at 200-foot intervals along their entire length. Rafts shall not be moored at prominent projections of the bank or at critical sections.

(6) Logs may be stored in certain tributary streams provided a clear channel at least one-half the width of the channel be left for navigation along the tributary. Such storage spaces shall be protected by booms and, if necessary to maintain an open channel, piling shall also be used. Authority for placing such booms and piling shall be obtained by written permit from the district engineer.

(7) The building, assembling, or breaking up of a raft in a waterway will be permitted only upon special authority obtained from the district engineer and under such conditions as he may prescribe.

(*g*) *Damage*

This section shall not affect the liability of the owners and operators of vessels for any damage caused by their operations to canal revetments, lock piers and walls, floodgates and appurtenances, bridges, and bridge fenders, or for displacing or damaging buoys, stakes, spars, range lights, or other aids to navigation. Should any part of a revetment, lock, floodgate, or bridge be damaged, the master shall report that fact, and furnish a clear statement of how the damage occurred, to the nearest Government lockmaster, gatetender, or bridgetender, and by mail to the district engineer in charge of the section of the waterway in which the damage occurred. Should any aid to navigation be damaged, the master shall report that fact immediately to the district Coast Guard officer, New Orleans, La.

(*h*) *Marine accidents*

Masters, mates, pilots, owners, or other persons using the waterways to which these regulations apply shall report to the district engineer by the most expeditious means available all marine accidents, such as fire, collision, sinking, or stranding, where there is possible obstruction of the channel or interference with navigation, furnishing a clear statement as to the name, address, and ownership of the vessel or vessels involved, the time and place, and the action taken. In all cases the owner of the sunken vessel shall take immediate steps to properly mark the wreck.

(*i*) *Trespass on United States property*

Trespass on waterway property or injury to the banks, locks, floodgates, bridges, piers, fences, trees, houses, shops, or any other property of the United States pertaining to the waterway is strictly prohibited. No business, trading, or landing of freight or baggage will be allowed on or over Government piers, lock walls, floodgates, or bridges.

Approved October 4, 1946.

ROBERT P. PATTERSON,
Secretary of War.

These rules and regulations will be in full force and effect and have the force of law 30 days after their publication in the Federal Register. They were published in the Federal Register October 29, 1946. Public notices of their approval were sent to all known interested parties on November 6, 1946.

Amended November 13, 1947 (Regs. October 10, 1947 [C. E. 800.211]–ENGWR) (40 Stat. 266, 33 U. S. C. 1).

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